

STAT 139: Final Project

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2022-12-14

EDA

```
library(dplyr)

##
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':
##
##   filter, lag

## The following objects are masked from 'package:base':
##
##   intersect, setdiff, setequal, union

# Load team data
team_data = list()
team_wins <- list()
drop = c("W", "L")
for (year in 1997:2022) {
  df1 = read.csv(paste("data/teams_data/batting", year, ".csv", sep=""))
  df2 = read.csv(paste("data/teams_data/pitching", year, ".csv", sep=""))
  df_tot = merge(df1, df2, by="Tm", suffixes=c(".bat", ".pitch"))

  df_tot = df_tot[
    !(df_tot$Tm %in% c("", "League Average")),
    !(names(df_tot) %in% drop)
  ]
  df_tot$Tm = factor(df_tot$Tm)
  team_data[[year]] = df_tot
  team_wins[[year]] = df_tot[, c("Tm", "W.L.")]
}

# Load player data
years <- 1997:2022
bps <- c("batting", "pitching")
player_data <- list()
for (year in years) {
  player_data[[year]] <- list()
```

```

for (bp in bps) {
  player_data[[year]][[bp]] <- read.csv(paste("data/player_data/", bp, year, ".csv", sep=""))
  quant_cols <- names(select_if(player_data[[year]][[bp]], is.numeric))
  for (col in quant_cols) {
    # impute data with mean
    df <- player_data[[year]][[bp]]
    player_data[[year]][[bp]][is.na(player_data[[year]][[bp]][,col]),col] <- mean(df[,col], na.rm=TRUE)
  }
}
}

```

```

# Data Cleaning for the Team Data
team_wins <- list()
for (year in years) {
  team_wins[[year]] <- team_data[[year]][!(team_data[[year]]$Tm %in% c("", "League Average")),c("Tm", "W")]
}

```

```

# Clean player data
for (year in years) {
  for (bp in bps) {
    player_data[[year]][[bp]]$year <- year
  }
}

long_team_names <- team_data[[year]][!(team_data[[year]]$Tm %in% c("", "League Average")),]$Tm
short_team_names <- c("ARI", "ATL", "BAL", "BOS", "CHC", "CHW", "CIN", "CLE", "COL", "DET",
                     "HOU", "KCR", "LAA", "LAD", "MIA", "MIL", "MIN", "NYM", "NYY", "OAK",
                     "PHI", "PIT", "SDP", "SFG", "SEA", "STL", "TBR", "TEX", "TOR", "WSN")

agg_data <- list()
for (year in years) {
  agg_data[[year]] <- list()
  for (bp in bps) {
    quant_cols <- names(select_if(player_data[[year]][[bp]], is.numeric))
    agg_data[[year]][[bp]] <- player_data[[year]][[bp]][, c("Tm", quant_cols)] %>%
      group_by(Tm) %>%
      summarise(across(quant_cols, ~weighted.mean(., w = G)))
    agg_data[[year]][[bp]] <- agg_data[[year]][[bp]][!(agg_data[[year]][[bp]]$Tm == "TOT"),]
    agg_data[[year]][[bp]]$long_Tm <- factor(
      agg_data[[year]][[bp]]$Tm,
      levels=short_team_names,
      labels=long_team_names
    )
  }
}

```

```

## Warning: Using an external vector in selections was deprecated in tidysselect 1.1.0.
## i Please use `all_of()` or `any_of()` instead.
## # Was:
## data %>% select(quant_cols)
##
## # Now:
## data %>% select(all_of(quant_cols))
##

```

See <<https://tidyselect.r-lib.org/reference/faq-external-vector.html>>.

```
player_combo <- list()
for (year in years) {
  player_combo[[year]] <- merge(agg_data[[year]][[bps[1]]], agg_data[[year]][[bps[2]]], by="Tm", suffix
}

# add response variable to player data
player_with_wins <- list()
for (year in 1997:2021) {
  player_with_wins[[year]] <- merge(player_combo[[year]], team_wins[[year+1]], by.x="long_Tm.pitch", by
}
player_with_wins_combined = bind_rows(player_with_wins, )
player_with_wins_combined$W.L..same_year = 100 * player_with_wins_combined$W.L..same_year
player_with_wins_combined$W.L..next_year = 100 * player_with_wins_combined$W.L..next_year
n.rows = nrow(player_with_wins_combined)
n.train = 0.8 * n.rows
train.rows = sample(n.rows, n.train)
train.df = player_with_wins_combined[train.rows,]
colnames(train.df)[colnames(train.df) == 'OPS.'] <- 'OPSplus'
colnames(train.df)[colnames(train.df) == 'ERA.'] <- 'ERApplus'
test.df = player_with_wins_combined[-train.rows,]
colnames(test.df)[colnames(test.df) == 'OPS.'] <- 'OPSplus'
colnames(test.df)[colnames(test.df) == 'ERA.'] <- 'ERApplus'
```

train.df

##		long_Tm.pitch	Tm	Rk.bat	Age.bat	G.bat	PA	AB
## 617	Baltimore Orioles	BAL	456.4977	26.35569	40.90016	146.8253	133.1030	
## 173	Texas Rangers	TEX	750.9102	28.39398	100.21677	404.9250	363.1861	
## 240	New York Mets	NYM	709.0449	30.67838	92.17260	311.6370	275.7353	
## 168	Pittsburgh Pirates	PIT	846.2444	29.57100	85.56368	274.6450	243.2978	
## 36	Los Angeles Dodgers	LAD	655.8436	28.31227	74.21364	238.6036	214.6236	
## 234	Detroit Tigers	DET	808.8164	29.13341	116.48406	454.6930	412.5201	
## 129	Chicago Cubs	CHC	523.1519	29.96664	93.97717	309.6857	273.0158	
## 29	Chicago Cubs	CHC	643.5819	29.74519	95.85934	319.2847	282.2180	
## 657	Los Angeles Dodgers	LAD	963.0012	29.14021	84.62062	272.7633	236.8074	
## 166	Oakland Athletics	OAK	562.8039	28.41809	120.38579	468.9178	416.7099	
## 472	Baltimore Orioles	BAL	818.3534	27.97970	95.52896	364.9684	330.8406	
## 407	San Francisco Giants	SFG	650.2573	28.41116	90.85087	286.5492	257.1219	
## 46	Seattle Mariners	SEA	632.8130	29.91427	105.06674	421.0535	373.0006	
## 528	Arizona Diamondbacks	ARI	641.0375	28.60931	87.20699	281.5278	248.7331	
## 124	Toronto Blue Jays	TOR	540.3356	28.39530	111.51635	442.8853	396.7017	
## 592	Cincinnati Reds	CIN	827.6259	27.90380	91.06854	270.3658	241.4009	
## 586	Arizona Diamondbacks	ARI	689.9789	28.63227	93.00421	305.7599	273.3416	
## 601	Minnesota Twins	MIN	642.7116	27.83145	104.70208	423.2297	380.7822	
## 612	Texas Rangers	TEX	641.0466	28.76542	103.26360	404.9849	361.9746	
## 61	Los Angeles Dodgers	LAD	677.6990	29.31771	99.17125	340.6818	299.2753	
## 216	Oakland Athletics	OAK	598.0801	28.60296	110.52898	450.4661	403.2639	
## 462	San Diego Padres	SDP	733.6403	28.16545	81.51311	239.1663	213.9742	
## 583	Texas Rangers	TEX	623.5298	27.21037	110.28963	430.2336	379.1728	
## 346	New York Mets	NYM	628.5285	28.87662	83.09060	270.7023	241.3197	
## 458	New York Yankees	NYN	781.8916	32.67903	100.93757	386.4735	348.3846	

## 630	Minnesota Twins	MIN	282.7343	28.71176	42.26570	153.7665	137.7118
## 510	Los Angeles Angels	LAA	753.1269	28.49915	101.66554	382.8923	342.0519
## 613	Toronto Blue Jays	TOR	709.3432	25.93693	96.35719	376.3978	339.5591
## 635	Pittsburgh Pirates	PIT	374.6788	27.15397	42.31457	155.1738	140.1175
## 429	New York Mets	NYM	696.2806	28.71429	76.45330	245.0196	220.4439
## 339	Colorado Rockies	COL	655.3991	29.14949	92.65332	290.9489	257.3918
## 354	St. Louis Cardinals	STL	796.9059	29.11383	93.27663	299.8088	264.6821
## 400	Minnesota Twins	MIN	743.0370	28.79126	108.09345	432.0516	384.6268
## 141	Oakland Athletics	OAK	591.2151	28.70721	108.71059	410.4257	365.0068
## 567	Kansas City Royals	KCR	671.1108	28.54845	91.77771	369.7213	335.4604
## 91	Oakland Athletics	OAK	709.2508	27.22041	118.04669	442.4332	383.1840
## 251	Washington Nationals	WSN	732.6816	28.68032	81.11283	266.1504	233.0221
## 171	Seattle Mariners	SEA	663.8175	31.86326	119.50773	479.0529	423.5392
## 347	New York Yankees	NYN	746.5459	29.99887	115.28458	460.7693	402.8577
## 319	New York Mets	NYM	808.9705	29.59675	83.11277	245.0628	216.5968
## 372	Minnesota Twins	MIN	810.6014	27.57355	90.58482	336.3221	306.9703
## 320	New York Yankees	NYN	687.1357	30.26029	119.42492	470.1758	412.2280
## 428	Minnesota Twins	MIN	669.6585	28.19298	98.84211	381.1643	341.3515
## 566	Houston Astros	HOU	704.2036	28.12565	111.34671	425.5992	376.4340
## 359	Arizona Diamondbacks	ARI	733.4256	28.35002	86.09968	292.4324	259.1948
## 547	Philadelphia Phillies	PHI	690.5378	27.08135	84.09850	278.7753	253.3355
## 159	Houston Astros	HOU	504.5072	30.51403	101.46344	337.1633	296.4579
## 77	Baltimore Orioles	BAL	481.4890	31.97513	89.10302	355.4369	314.0468
## 108	Detroit Tigers	DET	490.0530	28.17133	111.35198	421.6072	377.9417
## 624	Houston Astros	HOU	344.8188	29.07908	45.39209	173.5651	155.1021
## 76	Atlanta Braves	ATL	698.8594	31.11295	96.58750	326.3107	286.3799
## 653	Detroit Tigers	DET	644.0909	27.94645	102.05535	394.4386	353.3357
## 117	Philadelphia Phillies	PHI	555.9303	27.79692	99.54998	359.1221	317.4898
## 207	Colorado Rockies	COL	566.3741	27.35175	81.05175	264.1320	234.3579
## 460	Philadelphia Phillies	PHI	639.1337	30.12037	94.48462	322.8466	292.1409
## 442	Arizona Diamondbacks	ARI	793.6386	27.82266	75.06717	246.8755	224.5607
## 370	Los Angeles Dodgers	LAD	610.9666	29.59772	86.90075	275.4383	246.5099
## 152	Baltimore Orioles	BAL	529.7252	29.23827	103.49360	415.9433	380.0597
## 257	Chicago White Sox	CHW	753.6459	29.60384	99.72029	384.5042	341.5222
## 484	Milwaukee Brewers	MIL	780.2973	28.05340	84.56771	259.4199	236.4404
## 574	New York Yankees	NYN	835.9606	27.21442	104.98304	428.8964	376.6850
## 554	Texas Rangers	TEX	561.2781	28.26147	113.09529	444.1185	394.4312
## 392	Cincinnati Reds	CIN	667.8264	28.65464	95.15624	316.5994	284.2627
## 192	Philadelphia Phillies	PHI	687.1272	29.84123	98.19474	340.0039	296.1605
## 265	Minnesota Twins	MIN	654.8686	28.53491	110.11953	423.6337	379.0716
## 275	Texas Rangers	TEX	774.0565	29.26484	93.30268	357.8376	319.6566
## 286	Detroit Tigers	DET	794.4357	30.03406	109.71638	434.0223	387.9336
## 134	Houston Astros	HOU	567.0367	29.79586	98.08071	317.6737	278.7479
## 69	San Diego Padres	SDP	722.1239	29.61941	92.56833	280.1192	245.3542
## 155	Chicago White Sox	CHW	655.6758	29.18427	115.20225	422.0444	376.8719
## 7	Colorado Rockies	COL	655.0991	30.03525	100.40205	340.7434	301.8974
## 436	Seattle Mariners	SEA	765.5327	28.77237	99.94174	388.7345	349.2474
## 389	Boston Red Sox	BOS	760.5294	29.38353	84.94235	330.7529	300.3200
## 490	Pittsburgh Pirates	PIT	791.1451	28.57089	100.23630	322.5295	288.7051
## 673	Washington Nationals	WSN	917.9910	28.92958	74.27529	232.4469	202.9006
## 88	Minnesota Twins	MIN	576.2639	26.49830	109.95243	413.0204	369.0617
## 287	Houston Astros	HOU	650.8032	31.21783	96.58278	310.1647	280.1023
## 414	Arizona Diamondbacks	ARI	738.9870	28.56467	88.15799	295.7452	264.5816
## 219	San Diego Padres	SDP	674.2191	31.18843	87.25266	270.3020	235.7006

## 21	Seattle Mariners	SEA	565.5948	29.55208	116.31816	456.0808	397.7536
## 471	Atlanta Braves	ATL	768.4809	28.69261	76.39043	259.2817	233.3196
## 513	Milwaukee Brewers	MIL	708.2219	27.63830	86.17499	281.6809	248.1272
## 232	Cincinnati Reds	CIN	606.9397	29.88664	85.10948	289.5341	252.7616
## 250	Toronto Blue Jays	TOR	721.9520	28.65009	117.63158	452.2342	404.7646
## 292	New York Mets	NYM	663.3508	30.10491	94.49140	307.5338	269.5971
## 659	Milwaukee Brewers	MIL	1022.5247	28.67343	80.91128	253.6764	222.8838
## 164	New York Mets	NYM	702.2578	29.67366	84.31135	251.2672	224.8630
## 521	San Francisco Giants	SFG	731.3826	29.22551	90.38091	294.9510	260.6047
## 244	Pittsburgh Pirates	PIT	642.2158	28.17102	95.41862	303.4056	271.1379
## 584	Toronto Blue Jays	TOR	884.2342	28.82725	99.27014	371.0226	334.5670
## 79	Chicago Cubs	CHC	718.6353	30.17846	86.36257	294.8884	255.7590
## 122	St. Louis Cardinals	STL	776.4929	29.15537	101.27622	326.3647	288.0505
## 652	Colorado Rockies	COL	760.2439	28.19922	93.38021	301.3676	269.8416
## 4	Chicago Cubs	CHC	636.7694	29.18926	95.63427	288.9548	260.8274
## 660	Minnesota Twins	MIN	755.5096	28.27199	95.69540	359.6139	320.2452
## 644	Arizona Diamondbacks	ARI	985.4702	28.82688	77.75739	251.9526	226.2709
## 433	Pittsburgh Pirates	PIT	794.5225	28.04633	95.14929	298.9944	266.0579
## 618	Boston Red Sox	BOS	308.6935	27.04188	41.23786	164.3484	149.0017
## 600	Milwaukee Brewers	MIL	682.4275	28.97609	96.50567	306.5482	268.5778
## 305	Arizona Diamondbacks	ARI	896.9246	26.91270	86.31305	289.5891	257.0847
## 236	Kansas City Royals	KCR	548.1233	29.61167	93.98154	365.3109	328.2317
## 448	Cincinnati Reds	CIN	643.5666	28.92463	92.00919	306.1659	277.8244
## 540	Los Angeles Dodgers	LAD	783.0441	28.35326	91.70899	291.1793	254.1129
## 20	San Francisco Giants	SFG	616.4097	29.37565	102.00611	335.9236	290.6540
## 325	San Francisco Giants	SFG	907.0765	28.95365	92.48229	288.2667	262.1972
## 100	Arizona Diamondbacks	ARI	582.9130	31.12068	97.82473	320.6281	281.6294
## 111	Los Angeles Dodgers	LAD	539.3680	30.71258	95.24801	316.3795	282.2183
## 637	San Francisco Giants	SFG	340.0869	29.70398	43.27099	150.6789	134.6156
## 323	Pittsburgh Pirates	PIT	762.4360	26.98302	73.30748	236.7728	211.8536
## 591	Chicago White Sox	CHW	610.6368	27.61947	101.45639	394.3477	361.9241
## 223	Texas Rangers	TEX	653.7834	28.08601	120.25619	501.7828	454.0068
## 60	Kansas City Royals	KCR	648.5512	27.29491	112.02165	452.5219	405.0983
## 507	Detroit Tigers	DET	731.9053	29.86243	113.20223	434.5291	391.4997
## 394	Detroit Tigers	DET	603.7131	28.06848	114.08264	441.5065	394.5909
## 5	Chicago White Sox	CHW	571.5221	29.28489	105.53762	407.0712	360.7140
## 537	Houston Astros	HOU	535.8390	28.74478	112.62194	446.7036	399.2147
## 59	Houston Astros	HOU	457.5554	29.42315	90.12168	314.5576	267.8573
## 514	Minnesota Twins	MIN	801.3114	26.88483	94.24802	376.1944	337.6545
## 397	Los Angeles Dodgers	LAD	641.9897	30.19132	77.81685	238.4811	213.3018
## 260	Detroit Tigers	DET	775.1766	30.69158	118.19364	472.3561	425.5715
## 201	Atlanta Braves	ATL	549.8815	28.12882	94.53555	300.4438	266.3641
## 276	Toronto Blue Jays	TOR	884.9374	30.56371	112.04778	425.7577	380.2793
## 664	Philadelphia Phillies	PHI	871.8935	28.89433	86.45462	280.6779	246.7311
## 619	Chicago Cubs	CHC	272.2164	27.93881	45.37612	161.9194	139.7149
## 534	Cincinnati Reds	CIN	767.1820	27.01794	102.58793	346.9274	305.5149
## 417	Boston Red Sox	BOS	754.6014	29.46679	109.30605	444.1453	392.2568
## 262	Kansas City Royals	KCR	578.9907	27.99189	108.60950	411.0110	370.0394
## 598	Los Angeles Dodgers	LAD	821.8740	28.13404	91.13277	295.5180	258.1467
## 255	Boston Red Sox	BOS	780.9440	30.09487	121.95345	490.8939	426.1856
## 71	Seattle Mariners	SEA	582.0914	29.24872	104.43441	410.4253	361.2754
## 191	Oakland Athletics	OAK	544.6862	29.65030	118.12575	482.3844	427.6150
## 182	Colorado Rockies	COL	580.8714	30.20017	89.98878	300.6311	264.1984
## 39	New York Mets	NYM	611.1212	29.32889	92.22012	301.1879	265.8336

## 597	Los Angeles Angels	LAA	869.0516	28.73165	95.71904	375.2311	331.8612
## 647	Boston Red Sox	BOS	833.9994	28.06758	110.78305	435.1838	390.3889
## 383	Texas Rangers	TEX	603.1329	29.08232	115.75488	472.4098	425.7957
## 504	Chicago White Sox	CHW	553.7986	28.25386	105.03830	426.5330	385.0012
## 183	Detroit Tigers	DET	870.2255	28.04580	108.51615	421.4621	376.9084
## 89	New York Mets	NYM	683.2398	30.61699	93.33905	293.6856	255.6178
## 473	Boston Red Sox	BOS	731.9660	28.30967	98.69212	395.0483	357.8878
## 90	New York Yankees	NYN	779.7624	31.43353	103.17457	409.4208	359.1659
## 424	Kansas City Royals	KCR	553.6730	27.09580	113.99586	440.1981	401.7853
## 252	Arizona Diamondbacks	ARI	741.2524	26.91104	91.42331	296.3865	261.9908
## 496	Texas Rangers	TEX	578.3607	28.62780	100.11315	395.7272	352.5043
## 463	San Francisco Giants	SFG	655.4856	29.02415	93.48210	295.8693	268.1876
## 535	Colorado Rockies	COL	722.1614	28.21769	97.08244	322.6754	288.4852
## 199	Toronto Blue Jays	TOR	679.8736	28.10501	101.19048	401.3779	359.3700
## 87	Milwaukee Brewers	MIL	560.5500	28.94667	90.36888	305.7854	267.7629
## 197	St. Louis Cardinals	STL	785.7114	30.69661	100.92627	318.5432	280.2602
## 291	Minnesota Twins	MIN	730.3072	26.45098	110.30006	439.8740	392.0921
## 432	Philadelphia Phillies	PHI	788.9129	29.68310	81.79754	264.4445	240.3578
## 336	Chicago Cubs	CHC	640.1711	28.87143	90.73058	290.4515	261.4752
## 651	Cleveland Guardians	CLE	989.5139	26.65799	86.25908	327.5012	295.6229
## 157	Colorado Rockies	COL	768.8684	29.34863	91.15952	298.1505	260.8602
## 331	Washington Nationals	WSN	661.4744	28.67216	84.34939	279.0169	243.3536
## 571	Milwaukee Brewers	MIL	782.6000	28.74012	87.44644	272.0065	242.0876
## 74	Toronto Blue Jays	TOR	473.8609	28.42105	98.29704	407.1627	358.7169
## 640	Tampa Bay Rays	TBR	366.9400	27.21739	41.07196	142.8306	125.0525
## 524	Tampa Bay Rays	TBR	671.0545	27.64611	97.29701	373.6479	339.7407
## 72	St. Louis Cardinals	STL	623.6729	29.03356	94.98641	304.0433	265.0225
## 447	Chicago White Sox	CHW	614.6312	27.64290	106.87376	402.4810	367.3881
## 670	Tampa Bay Rays	TBR	854.1938	27.72305	106.86353	398.4897	352.1967
## 64	New York Mets	NYM	592.8626	30.20983	101.23147	334.6291	288.0475
## 363	Chicago Cubs	CHC	610.6407	29.13131	99.17964	311.1262	281.9260
## 399	Milwaukee Brewers	MIL	677.7782	29.16296	93.82486	301.1974	268.7211
## 115	New York Yankees	NYN	805.8987	31.20905	114.76295	464.3574	415.2335
## 650	Cincinnati Reds	CIN	819.0416	28.95385	86.47342	284.9683	250.7165
## 493	Seattle Mariners	SEA	861.9916	28.53975	107.69093	402.6193	364.1282
## 66	Oakland Athletics	OAK	718.6967	28.50955	111.01855	413.9225	353.6050
## 421	Colorado Rockies	COL	620.4285	27.83784	84.24150	268.5323	244.4346
## 148	Texas Rangers	TEX	745.6149	28.87500	99.56390	382.2192	337.2859
## 559	Baltimore Orioles	BAL	885.1617	28.42504	86.56614	328.3551	300.5015
## 385	Washington Nationals	WSN	630.0880	28.52883	92.49025	295.1027	264.0381
## 302	Texas Rangers	TEX	587.5513	27.69929	98.61792	399.1863	352.9817
## 437	St. Louis Cardinals	STL	590.9006	28.18928	102.09248	340.2891	304.7783
## 452	Kansas City Royals	KCR	515.4968	28.27251	121.43084	465.6392	426.6057
## 290	Milwaukee Brewers	MIL	613.7310	29.41803	99.84511	350.5720	311.0199
## 226	Arizona Diamondbacks	ARI	590.4374	29.42059	94.10559	323.6792	289.4605
## 621	Cincinnati Reds	CIN	311.8614	28.99398	40.21687	139.1370	120.1054
## 53	Boston Red Sox	BOS	753.6634	28.83343	110.33489	436.1987	383.7580
## 154	Chicago Cubs	CHC	575.4409	31.36501	87.46625	276.2123	246.2869
## 667	San Francisco Giants	SFG	878.3850	30.25589	86.42072	247.8619	218.5534
## 301	Tampa Bay Rays	TBR	636.6535	27.12167	107.81228	417.7984	365.5394
## 497	Toronto Blue Jays	TOR	739.3025	29.44776	107.70838	407.9323	358.6866
## 309	Chicago Cubs	CHC	665.0276	29.40862	88.95172	287.3991	251.6207
## 585	Washington Nationals	WSN	930.3098	28.06063	85.26910	282.1391	245.9315
## 409	St. Louis Cardinals	STL	581.3339	28.72182	95.80878	312.0456	276.9916

## 373	New York Mets	NYM	676.1866	28.55092	83.22156	267.2970	236.7179
## 67	Philadelphia Phillies	PHI	487.4441	28.37955	99.94954	342.5235	301.5270
## 614	Washington Nationals	WSN	895.5667	29.27503	92.24705	315.9261	276.1941
## 322	Philadelphia Phillies	PHI	780.2762	31.55861	104.02931	368.0999	324.2158
## 636	San Diego Padres	SDP	367.0688	26.74531	41.79375	156.8641	138.4984
## 202	Baltimore Orioles	BAL	737.1470	31.37789	103.72685	398.8848	361.1991
## 582	Tampa Bay Rays	TBR	771.3409	27.06784	90.16725	345.5292	306.1140
## 405	Pittsburgh Pirates	PIT	697.1410	27.97206	87.90370	277.7373	250.0555
## 218	Pittsburgh Pirates	PIT	765.8063	27.85260	92.48897	293.6011	262.9987
## 68	Pittsburgh Pirates	PIT	710.4955	28.16577	90.22939	303.2330	265.6873
## 303	Toronto Blue Jays	TOR	899.8240	31.09476	102.25368	392.2566	349.0218
## 310	Chicago White Sox	CHW	736.1644	29.69358	105.08957	403.7920	360.1126
## 544	New York Mets	NYM	681.4305	28.60433	75.39864	236.6791	211.2580
## 238	Milwaukee Brewers	MIL	589.3411	28.94056	87.46914	286.9785	252.6872
## 615	Arizona Diamondbacks	ARI	379.1990	28.99005	40.78441	157.3599	141.3035
## 181	Cincinnati Reds	CIN	631.1918	28.61344	90.08476	294.0946	257.9110
## 562	Chicago White Sox	CHW	654.9952	26.51071	108.35000	417.2756	379.3101
## 341	Houston Astros	HOU	615.4759	29.68217	84.90612	267.6171	244.4302
## 446	Chicago Cubs	CHC	783.1722	27.04877	81.25550	252.2374	226.8205
## 137	Milwaukee Brewers	MIL	665.3427	29.79273	87.80917	267.6720	238.3903
## 374	New York Yankees	NYN	692.2151	30.45101	119.57391	472.2539	412.4267
## 672	Toronto Blue Jays	TOR	752.5156	26.96016	108.26328	419.7177	380.2194
## 23	Texas Rangers	TEX	621.7664	28.37921	101.82581	386.4752	349.2347
## 213	Minnesota Twins	MIN	676.5994	27.55789	104.52164	398.9047	357.7561
## 443	Atlanta Braves	ATL	808.0933	26.94139	96.60325	326.9955	294.4220
## 381	St. Louis Cardinals	STL	660.8012	29.19291	92.79823	296.6404	263.0950
## 212	Milwaukee Brewers	MIL	617.0841	28.33151	96.81992	331.6762	293.3597
## 494	St. Louis Cardinals	STL	766.8552	28.42761	94.17265	295.3259	263.9645
## 542	Milwaukee Brewers	MIL	745.9740	27.63716	96.25252	299.0831	267.2160
## 280	Baltimore Orioles	BAL	746.3141	29.99884	117.85483	459.9578	409.9254
## 431	Oakland Athletics	OAK	764.4441	28.18151	108.89041	411.5091	365.7888
## 18	Pittsburgh Pirates	PIT	753.8088	26.51894	85.76476	278.1066	248.1586
## 312	Colorado Rockies	COL	684.0792	28.05510	98.55575	328.6612	284.6694
## 278	Arizona Diamondbacks	ARI	817.5435	27.02386	91.82987	301.1692	265.9982
## 556	Washington Nationals	WSN	892.3542	29.44702	82.80035	276.7649	246.9076
## 180	Chicago White Sox	CHW	693.2785	28.60537	108.85756	410.6696	366.5131
## 209	Houston Astros	HOU	534.7724	30.30746	104.31444	332.3423	296.4379
## 19	San Diego Padres	SDP	579.3192	30.10785	93.14668	318.9918	280.8421
## 177	Baltimore Orioles	BAL	779.9220	30.32375	111.54428	461.9912	409.7003
## 150	Arizona Diamondbacks	ARI	598.1657	30.26410	83.29996	261.2672	232.0643
## 476	Cincinnati Reds	CIN	647.6565	29.35217	90.85217	303.5804	271.3713
## 109	Houston Astros	HOU	493.2516	30.19477	102.55275	359.4225	313.0261
## 470	Arizona Diamondbacks	ARI	745.9444	26.89809	92.52102	306.3461	275.1393
## 627	Los Angeles Dodgers	LAD	384.7977	27.95106	46.27896	180.6493	159.0881
## 93	Pittsburgh Pirates	PIT	769.4722	28.37081	88.01058	299.3082	261.9537
## 445	Boston Red Sox	BOS	668.1259	29.15095	89.48329	354.5626	315.2214
## 84	Houston Astros	HOU	555.2201	29.13581	91.09345	305.2904	262.8092
## 456	Minnesota Twins	MIN	751.6107	27.51905	92.77857	365.1363	325.3583
## 382	Tampa Bay Rays	TBR	741.0775	28.18461	113.02199	428.7176	377.3073
## 50	Arizona Diamondbacks	ARI	613.5198	29.74406	93.73473	345.1193	305.4340
## 416	Baltimore Orioles	BAL	761.4569	27.93490	119.20976	481.9807	440.4442
## 92	Philadelphia Phillies	PHI	570.2610	28.97628	80.91943	274.6495	242.3724
## 641	Texas Rangers	TEX	351.1681	27.53411	34.91681	130.4759	117.3145
## 530	Baltimore Orioles	BAL	788.4577	28.74208	111.10938	424.9447	390.7265

## 247	Seattle Mariners	SEA	620.2277	28.58451	119.21948	478.7236	438.0628
## 196	Seattle Mariners	SEA	697.2198	31.46203	103.43383	409.8539	369.2641
## 314	Houston Astros	HOU	663.6619	31.52781	99.06210	323.8396	291.6257
## 665	Pittsburgh Pirates	PIT	884.9894	27.57028	76.07516	236.5168	210.8246
## 594	Detroit Tigers	DET	613.8851	27.60049	86.39275	332.2815	304.6146
## 379	San Francisco Giants	SFG	749.7065	30.10974	77.48575	226.0234	203.6516
## 272	San Francisco Giants	SFG	706.8904	31.65873	92.09902	298.0510	265.7905
## 96	Seattle Mariners	SEA	652.9341	31.14085	113.71437	443.4969	375.8851
## 351	San Diego Padres	SDP	647.6033	28.87377	89.98841	279.4023	247.0515
## 98	Texas Rangers	TEX	618.6446	29.34852	99.32460	385.4265	340.7118
## 264	Milwaukee Brewers	MIL	637.1490	28.41046	97.33551	319.1525	283.8375
## 506	Colorado Rockies	COL	618.4216	27.93152	88.79845	297.4978	267.1985
## 47	St. Louis Cardinals	STL	602.1319	30.28690	90.63843	297.5192	257.7576
## 172	St. Louis Cardinals	STL	755.1911	30.37161	99.41695	325.6047	284.7042
## 411	Texas Rangers	TEX	656.2959	29.52983	127.85203	504.0322	453.5913
## 151	Atlanta Braves	ATL	507.1810	30.73402	106.86015	357.1193	317.5448
## 103	Boston Red Sox	BOS	681.0585	30.03662	101.49616	395.2817	352.5210
## 378	San Diego Padres	SDP	573.6652	27.95224	77.89501	241.9776	216.5955
## 268	Oakland Athletics	OAK	671.2644	28.90237	95.42207	392.2553	342.8132
## 11	Los Angeles Dodgers	LAD	620.0229	29.31553	93.40159	311.1567	278.5640
## 45	San Francisco Giants	SFG	596.9475	30.56120	95.07378	316.3832	273.5551
## 365	Cincinnati Reds	CIN	635.9415	28.50430	93.08778	304.9613	269.2513
## 139	New York Mets	NYM	666.3110	30.40899	99.26814	316.7548	283.2397
## 575	Oakland Athletics	OAK	764.4865	27.99706	121.08108	475.9454	423.3796
## 671	Texas Rangers	TEX	853.2818	26.92634	96.18600	372.3229	337.9730
## 604	Oakland Athletics	OAK	776.3785	27.96704	114.62684	448.1860	396.2602
## 187	Milwaukee Brewers	MIL	584.3717	28.45320	97.28213	323.2024	286.0170
## 16	Oakland Athletics	OAK	613.4091	28.14177	96.30519	344.6618	302.1331
## 565	Detroit Tigers	DET	659.0390	27.82593	102.03361	387.4856	353.4856
## 607	San Diego Padres	SDP	923.3754	26.42635	92.77441	289.7058	259.7660
## 413	Washington Nationals	WSN	689.0559	27.51908	92.53079	302.2073	273.1687
## 185	Kansas City Royals	KCR	622.2262	28.92581	81.98222	329.5346	296.9093
## 477	Colorado Rockies	COL	612.6828	28.17821	85.77963	273.5238	250.5947
## 500	Atlanta Braves	ATL	679.2300	28.62053	79.48211	269.8071	240.0051
## 145	San Francisco Giants	SFG	663.3332	31.64043	97.47048	328.1127	284.9137
## 337	Chicago White Sox	CHW	829.7787	30.54605	116.03349	451.8343	405.4498
## 51	Atlanta Braves	ATL	725.3233	29.69400	102.81010	330.8235	289.4066
## 406	San Diego Padres	SDP	602.3460	27.57391	90.74079	283.4964	251.5604
## 377	Pittsburgh Pirates	PIT	730.2454	27.55969	84.49029	250.4928	223.4568
## 116	Oakland Athletics	OAK	615.5409	27.42437	117.72631	475.7204	415.4285
## 113	Minnesota Twins	MIN	657.6933	26.34247	112.17927	436.3740	392.3198
## 311	Cincinnati Reds	CIN	713.0565	28.24715	77.89395	242.1963	214.9763
## 25	Arizona Diamondbacks	ARI	592.1615	27.65479	92.98704	318.8413	285.6645
## 2	Baltimore Orioles	BAL	594.6947	31.40766	114.69926	441.1144	389.1710
## 266	New York Mets	NYM	633.0683	30.86819	88.83146	296.9175	262.4914
## 560	Boston Red Sox	BOS	650.4521	27.81092	111.01057	437.2161	389.0482
## 393	Colorado Rockies	COL	688.6163	28.11194	83.06825	251.0995	227.2867
## 454	Miami Marlins	MIA	774.8522	27.74923	97.03432	325.3322	291.5086
## 631	New York Mets	NYM	293.6161	27.71672	44.07430	164.3808	144.7229
## 355	Tampa Bay Rays	TBR	669.1681	27.56706	113.21619	432.8381	375.6718
## 221	Seattle Mariners	SEA	699.2510	28.75192	101.90866	405.1214	364.8203
## 576	Philadelphia Phillies	PHI	698.0033	26.82297	94.57431	305.9242	269.5858
## 395	Houston Astros	HOU	619.7715	26.80368	75.94403	220.6019	198.1930
## 633	Oakland Athletics	OAK	326.7083	27.95673	42.75000	159.0224	136.4087

## 249	Texas Rangers	TEX	710.9988	28.36623	109.19243	457.8200	413.0137
## 277	Washington Nationals	WSN	668.7400	28.10892	99.64148	306.6720	273.6367
## 529	Atlanta Braves	ATL	712.9966	28.53171	86.36247	287.2601	258.8188
## 459	Oakland Athletics	OAK	649.9745	29.55130	104.43649	387.8480	343.5191
## 662	New York Yankees	NYN	1039.7180	29.21799	99.51442	372.7866	328.0311
## 451	Houston Astros	HOU	569.4305	25.58318	102.50268	393.0650	354.3244
## 348	Oakland Athletics	OAK	595.9936	27.81276	103.17554	394.0181	349.7888
## 526	Toronto Blue Jays	TOR	761.3905	29.91081	115.42882	443.0246	387.8536
## 638	Seattle Mariners	SEA	416.8543	26.75712	38.61139	146.9414	129.0285
## 35	Kansas City Royals	KCR	700.4614	28.75218	101.55369	393.4904	352.0168
## 489	Philadelphia Phillies	PHI	638.9373	28.01491	87.29285	272.3941	249.9093
## 654	Houston Astros	HOU	653.2394	28.89894	108.37589	431.4799	382.7193
## 229	Boston Red Sox	BOS	808.1780	30.41243	106.24520	427.6435	371.1119
## 646	Baltimore Orioles	BAL	1087.8502	26.71875	99.91981	377.6468	341.8650
## 317	Milwaukee Brewers	MIL	562.1912	29.57374	91.64420	310.0989	270.6700
## 425	Los Angeles Dodgers	LAD	720.2368	30.25033	89.78500	280.3615	251.1736
## 488	Oakland Athletics	OAK	814.2532	28.04822	111.26521	417.7268	380.0419
## 99	Toronto Blue Jays	TOR	495.1614	28.12087	113.14206	469.7059	419.8654
## 205	Chicago White Sox	CHW	701.8030	29.31532	118.88949	464.6336	416.9417
## 533	Chicago White Sox	CHW	533.8373	26.61645	100.41077	388.8935	356.7574
## 81	Cincinnati Reds	CIN	780.1370	28.92894	93.23170	300.0310	265.1753
## 1	Atlanta Braves	ATL	575.0951	27.94490	102.02282	334.5889	292.7727
## 367	Detroit Tigers	DET	635.0587	28.72536	112.48946	420.5219	373.1664
## 283	Chicago White Sox	CHW	748.8659	30.34426	120.09602	467.0831	415.4344
## 13	Minnesota Twins	MIN	592.4803	28.97168	109.30751	416.5434	372.3607
## 208	Detroit Tigers	DET	854.9103	28.41576	104.00602	402.6173	367.7509
## 527	Washington Nationals	WSN	947.5971	29.03486	94.66284	320.3703	282.5565
## 161	Los Angeles Dodgers	LAD	559.6072	30.05170	96.11887	302.8931	275.0247
## 475	Chicago White Sox	CHW	637.9160	28.14592	114.49739	434.9438	396.8344
## 512	Miami Marlins	MIA	867.8260	28.69091	98.47438	308.0017	278.3000
## 9	Houston Astros	HOU	426.3827	28.65774	95.77349	325.4158	279.1271
## 420	Cincinnati Reds	CIN	652.9283	28.39742	101.36849	349.9297	304.6409
## 289	Los Angeles Dodgers	LAD	663.2358	28.84648	89.69720	287.2383	256.5848
## 195	San Francisco Giants	SFG	622.5063	31.23564	98.50676	319.7504	274.2069
## 269	Philadelphia Phillies	PHI	717.5619	29.15553	101.91337	337.5957	294.0895
## 335	Boston Red Sox	BOS	714.7366	30.70810	98.84379	386.3050	343.5103
## 17	Philadelphia Phillies	PHI	603.3792	27.84745	90.08559	293.0137	260.2616
## 297	San Diego Padres	SDP	518.9866	29.05061	79.08910	266.8590	239.2279
## 666	San Diego Padres	SDP	867.2850	28.53287	98.49939	309.3340	271.7738
## 623	Detroit Tigers	DET	293.1186	27.33278	36.53871	132.8764	121.1713
## 190	New York Yankees	NYN	796.7484	32.23296	119.88643	475.9406	411.6430
## 295	Philadelphia Phillies	PHI	719.3437	30.62558	109.23391	345.4767	303.6416
## 222	St. Louis Cardinals	STL	751.3012	30.77681	96.93287	314.2092	278.0414
## 501	Baltimore Orioles	BAL	812.3857	28.64252	118.70554	459.8975	418.4676
## 464	Seattle Mariners	SEA	722.2934	27.53842	97.93714	360.0308	327.7427
## 140	New York Yankees	NYN	905.6144	30.14601	119.15614	490.2551	428.8063
## 176	Atlanta Braves	ATL	594.4281	29.26975	96.51921	311.5732	272.3979
## 558	Atlanta Braves	ATL	665.8489	27.65925	95.17894	331.6374	296.8797
## 546	Oakland Athletics	OAK	653.4219	28.73552	95.28321	366.3441	326.7133
## 102	Baltimore Orioles	BAL	565.5771	29.97459	100.23533	387.1990	343.6092
## 12	Milwaukee Brewers	MIL	708.4984	28.08042	106.80635	383.9655	342.2642
## 430	New York Yankees	NYN	810.7782	31.68882	95.05765	353.6565	318.7476
## 350	Pittsburgh Pirates	PIT	647.6700	27.21388	84.18725	272.3466	246.0179
## 516	New York Yankees	NYN	665.5448	29.81861	109.71855	416.1328	374.8256

## 14	New York Mets	NYM	501.7476	27.55107	96.22232	309.7588	273.2429
## 577	Pittsburgh Pirates	PIT	727.6001	27.49756	88.74967	285.9618	256.1039
## 403	Oakland Athletics	OAK	738.9210	27.70869	92.58504	361.9421	323.1490
## 10	Kansas City Royals	KCR	553.6265	28.64377	96.54551	361.9721	319.4779
## 531	Boston Red Sox	BOS	672.5457	27.40563	106.04103	425.2093	378.5158
## 342	Kansas City Royals	KCR	389.0660	28.85617	97.06049	385.3093	348.1648
## 465	St. Louis Cardinals	STL	643.2421	28.32037	96.49388	312.0039	277.5691
## 210	Kansas City Royals	KCR	533.9805	28.04911	102.17988	387.5645	351.1213
## 132	Colorado Rockies	COL	744.5436	28.88790	90.39594	285.9996	254.2644
## 390	Chicago Cubs	CHC	612.7479	27.86577	86.16616	269.7609	245.3517
## 228	Baltimore Orioles	BAL	756.5852	30.24101	113.57160	449.6588	404.1414
## 271	San Diego Padres	SDP	464.6734	30.03585	91.82246	306.1274	272.8039
## 520	San Diego Padres	SDP	850.4696	28.09193	83.28140	251.7285	226.9158
## 304	Washington Nationals	WSN	616.2678	28.02028	76.84030	234.6202	209.9248
## 133	Detroit Tigers	DET	702.6902	28.05605	87.05793	334.6681	305.8073
## 28	Boston Red Sox	BOS	686.7829	28.68528	110.38297	429.7411	383.3790
## 561	Chicago Cubs	CHC	688.2802	27.79405	102.10604	325.8768	287.6334
## 200	Arizona Diamondbacks	ARI	587.8037	29.66539	101.66667	337.6330	297.2461
## 144	San Diego Padres	SDP	635.8078	29.24007	85.81418	280.5801	250.0478
## 274	St. Louis Cardinals	STL	747.5117	30.40883	88.38884	267.3122	236.9471
## 376	Philadelphia Phillies	PHI	785.7920	30.92593	92.40558	315.2442	280.5844
## 293	New York Yankees	NYN	507.3295	31.11792	110.11676	432.4728	384.7717
## 225	Washington Nationals	WSN	541.3531	29.22968	87.88430	279.5751	246.9067
## 444	Baltimore Orioles	BAL	694.8719	28.23495	111.71783	428.0673	390.7485
## 332	Arizona Diamondbacks	ARI	766.9688	27.07477	94.73565	324.2510	286.8393
## 149	Toronto Blue Jays	TOR	713.8357	27.26622	103.36507	415.3996	370.2462
## 628	Miami Marlins	MIA	222.6105	28.74245	36.60890	129.4388	115.0461
## 263	Los Angeles Dodgers	LAD	631.9778	30.04275	94.33445	304.3994	272.2259
## 384	Toronto Blue Jays	TOR	595.7262	28.50542	94.10108	373.0945	331.4176
## 388	Baltimore Orioles	BAL	650.0452	28.04455	102.92173	407.6562	368.8224
## 356	Texas Rangers	TEX	588.7436	28.19614	103.96487	413.5597	371.3589
## 358	Washington Nationals	WSN	659.0922	28.99495	98.37516	301.7053	267.2013
## 130	Chicago White Sox	CHW	676.4008	28.74744	108.72152	421.2435	372.0108
## 629	Milwaukee Brewers	MIL	384.8003	28.49319	40.87897	142.0363	124.3918
## 481	Los Angeles Angels	LAA	649.2463	28.57433	106.15195	392.7680	354.5123
## 83	Detroit Tigers	DET	479.5252	28.94519	108.93512	416.2388	371.5006
## 112	Milwaukee Brewers	MIL	592.5318	29.49026	86.87094	276.5310	246.9168
## 386	Arizona Diamondbacks	ARI	789.8483	28.51051	87.85649	297.3186	264.2706
## 455	Milwaukee Brewers	MIL	762.5518	28.79843	100.51377	323.9467	292.7390
## 211	Los Angeles Dodgers	LAD	680.9571	28.54745	84.41692	251.2726	223.4968
## 75	Arizona Diamondbacks	ARI	641.6346	30.62960	87.28688	299.0054	264.1979
## 97	St. Louis Cardinals	STL	757.1504	29.94268	93.43034	311.9533	268.6949
## 8	Detroit Tigers	DET	514.6390	26.46053	116.56751	445.3976	393.5738
## 609	Seattle Mariners	SEA	909.9781	27.73389	92.14134	349.8918	309.7564
## 491	San Diego Padres	SDP	828.9928	27.97877	91.58344	289.1206	262.4425
## 136	Los Angeles Dodgers	LAD	526.4529	30.36939	103.69305	340.2247	308.6601
## 328	Tampa Bay Rays	TBR	663.4195	28.08019	116.90703	451.8030	394.9181
## 241	New York Yankees	NYN	645.5326	30.89907	108.26056	420.8601	366.7394
## 423	Houston Astros	HOU	473.1190	26.02709	93.04005	350.5077	317.5948
## 55	Chicago White Sox	CHW	706.0651	25.91730	114.57419	450.4463	405.9560
## 581	St. Louis Cardinals	STL	749.6267	27.69719	93.01155	299.5153	265.3993
## 398	Miami Marlins	MIA	722.0470	28.38926	78.21700	245.9915	220.5271
## 121	Seattle Mariners	SEA	632.5524	31.30968	123.51464	479.0039	420.8243
## 580	Seattle Mariners	SEA	883.7575	29.72122	112.72881	429.9433	389.9766

## 434	San Diego Padres	SDP	612.3483	28.36078	89.78966	275.2849	248.9612
## 483	Miami Marlins	MIA	869.2522	28.09425	87.95752	285.9907	262.8850
## 56	Cincinnati Reds	CIN	762.4652	28.06527	108.41427	355.7054	314.5004
## 306	Atlanta Braves	ATL	636.5872	28.88273	88.13284	278.7369	244.2462
## 160	Kansas City Royals	KCR	597.2136	29.12671	110.92148	441.5776	394.0238
## 569	Los Angeles Dodgers	LAD	761.3772	28.37875	94.59084	293.6185	257.4415
## 655	Kansas City Royals	KCR	888.1430	29.29660	117.18406	443.4267	400.8529
## 189	New York Mets	NYM	810.4962	30.35267	82.11939	248.8831	221.0648
## 261	Houston Astros	HOU	621.6169	31.31497	94.96636	297.4390	264.0391
## 52	Baltimore Orioles	BAL	434.6612	32.42010	112.73123	439.0536	385.2326
## 329	Texas Rangers	TEX	589.1470	27.81093	109.74246	439.0107	395.9052
## 658	Miami Marlins	MIA	568.9423	28.29013	72.55351	210.8240	190.5727
## 326	Seattle Mariners	SEA	611.4733	29.76617	93.03980	376.4602	342.2929
## 227	Atlanta Braves	ATL	726.8708	27.71636	97.73043	318.0559	282.9723
## 509	Kansas City Royals	KCR	597.6854	28.51543	111.58197	437.1452	401.3194
## 318	Minnesota Twins	MIN	711.9012	27.54503	114.64912	443.1281	390.9731
## 352	San Francisco Giants	SFG	859.9884	29.25717	90.82884	283.4514	253.3962
## 579	San Francisco Giants	SFG	785.4096	29.64738	84.55405	259.5887	234.6702
## 230	Chicago Cubs	CHC	725.2735	28.66019	92.73575	290.3043	264.8506
## 246	San Francisco Giants	SFG	648.5796	32.58652	90.82174	299.5600	266.3604
## 563	Cincinnati Reds	CIN	774.2690	27.19078	91.90355	307.0550	271.9645
## 31	Cincinnati Reds	CIN	789.4468	27.38798	89.42598	291.8471	256.6589
## 126	Atlanta Braves	ATL	547.6390	30.95498	100.14423	323.6403	285.2426
## 313	Detroit Tigers	DET	707.0618	29.59742	115.85570	436.1235	388.0943
## 242	Oakland Athletics	OAK	708.5713	29.63514	115.36978	468.3133	409.1603
## 120	San Francisco Giants	SFG	599.4352	31.16746	93.93241	306.4787	267.0357
## 101	Atlanta Braves	ATL	633.7533	30.59536	90.90814	292.8294	262.2288
## 616	Atlanta Braves	ATL	276.6754	28.32953	45.43393	181.2382	159.2007
## 419	Chicago White Sox	CHW	683.8200	29.01004	106.49115	413.4941	377.5809
## 557	Arizona Diamondbacks	ARI	651.8440	29.27192	89.80523	284.2319	252.1573
## 78	Boston Red Sox	BOS	666.2880	29.31694	97.09399	363.0563	320.2956
## 217	Philadelphia Phillies	PHI	656.0887	30.15642	98.00000	338.5784	295.5330
## 43	Pittsburgh Pirates	PIT	812.4685	26.98392	92.28801	311.4754	281.3399
## 632	New York Yankees	NYN	431.8884	28.48837	41.64806	146.1597	126.1240
## 284	Cincinnati Reds	CIN	603.1402	29.09392	85.89163	271.4688	240.6626
## 552	St. Louis Cardinals	STL	693.6775	27.98400	87.82274	279.8901	244.6455
## 570	Miami Marlins	MIA	742.6406	27.70038	88.38571	280.3736	252.8939
## 194	San Diego Padres	SDP	688.0350	29.65849	95.60946	326.5696	287.8008
## 661	New York Mets	NYM	826.4332	28.40588	85.82101	260.8008	231.7126
## 453	Los Angeles Dodgers	LAD	801.8396	29.42710	93.57978	307.8292	276.0791
## 294	Oakland Athletics	OAK	524.9100	27.14019	103.72897	388.6916	342.9924
## 156	Cincinnati Reds	CIN	634.2579	27.37797	73.19352	230.8803	204.9853
## 362	Boston Red Sox	BOS	739.2633	30.04005	111.15665	456.6620	405.2939
## 285	Colorado Rockies	COL	667.3809	27.88445	86.88137	289.6788	255.5927
## 578	San Diego Padres	SDP	879.3091	27.12912	89.45319	286.4934	260.7123
## 220	San Francisco Giants	SFG	612.1293	31.77191	91.16581	288.6254	259.6869
## 142	Philadelphia Phillies	PHI	581.5000	28.07451	100.35548	348.5732	306.1531
## 15	New York Yankees	NYN	674.7440	30.61656	101.76923	417.4504	364.3265
## 608	San Francisco Giants	SFG	837.4203	29.68799	81.03854	258.9188	233.5310
## 300	St. Louis Cardinals	STL	735.4228	29.19932	96.88889	315.1200	278.4576
## 163	Minnesota Twins	MIN	702.2874	27.28342	108.91738	418.5221	375.0413
## 548	Pittsburgh Pirates	PIT	716.2599	28.13960	89.78952	290.6851	258.1224
## 634	Philadelphia Phillies	PHI	337.3006	28.45411	43.87342	162.6915	142.1535
## 555	Toronto Blue Jays	TOR	695.7980	30.77015	110.32917	409.5380	365.2474

## 511	Los Angeles Dodgers	LAD	821.0433	28.93584	91.37270	291.4945	260.3441
## 368	Houston Astros	HOU	625.1996	27.91592	78.67473	237.7987	216.1049
## 70	San Francisco Giants	SFG	615.9455	30.07429	97.09670	324.8822	281.0760
## 239	Minnesota Twins	MIN	668.7402	28.33135	107.62574	425.4970	380.9422
## 123	Texas Rangers	TEX	784.3494	29.78839	95.78546	387.9467	343.0258
## 333	Atlanta Braves	ATL	619.9602	29.00169	92.76715	289.7477	253.9699
## 138	Minnesota Twins	MIN	652.4134	26.73364	113.87203	432.3532	389.5165
## 224	Toronto Blue Jays	TOR	658.7927	28.05125	123.15492	465.1538	417.4292
## 193	Pittsburgh Pirates	PIT	777.7745	27.46177	99.27194	315.9353	284.5460
## 645	Atlanta Braves	ATL	819.0068	28.90638	84.04000	270.4672	239.8826
## 649	Chicago White Sox	CHW	731.4748	28.06603	90.34814	350.1399	306.8860
## 656	Los Angeles Angels	LAA	1070.4025	29.27105	90.72088	344.9262	311.8005
## 135	Kansas City Royals	KCR	634.1458	29.28865	107.43504	417.7190	372.5191
## 498	Washington Nationals	WSN	935.4610	28.52629	91.32820	307.9510	273.3595
## 387	Atlanta Braves	ATL	702.0978	28.61266	94.91652	323.6804	285.7962
## 439	Texas Rangers	TEX	575.7966	29.47879	115.33818	440.4893	397.2109
## 330	Toronto Blue Jays	TOR	766.1575	30.04823	111.81563	460.0067	411.5983
## 599	Miami Marlins	MIA	647.3102	28.44364	83.68475	263.2377	240.5445
## 467	Texas Rangers	TEX	585.3305	28.33413	95.29327	367.5715	332.8035
## 538	Kansas City Royals	KCR	602.7769	28.88757	119.57278	460.3183	422.6976
## 587	Atlanta Braves	ATL	668.2514	28.39061	92.85188	314.3441	276.1849
## 175	Arizona Diamondbacks	ARI	557.9748	28.82059	77.81838	257.8917	234.5122
## 589	Boston Red Sox	BOS	601.2711	27.48338	113.31487	466.4402	414.1831
## 622	Colorado Rockies	COL	341.2426	28.91549	43.41002	158.4116	143.6776
## 518	Philadelphia Phillies	PHI	585.4972	27.06837	90.74816	290.3639	263.9650
## 203	Boston Red Sox	BOS	785.3728	31.32205	111.99492	448.8263	392.8449
## 179	Chicago Cubs	CHC	670.1897	30.22060	95.00707	322.0380	288.6786
## 422	Detroit Tigers	DET	627.6177	29.82193	115.40719	457.9635	410.6224
## 214	New York Mets	NYM	596.8841	29.58341	93.88909	321.1975	288.5935
## 605	Philadelphia Phillies	PHI	805.2246	27.91073	88.06957	303.5008	268.6123
## 178	Boston Red Sox	BOS	725.2480	30.45705	108.56888	412.2939	360.0675
## 344	Milwaukee Brewers	MIL	569.8603	28.45166	97.54342	345.2269	305.6705
## 461	Pittsburgh Pirates	PIT	832.8434	27.48348	97.65208	309.4462	275.3110
## 440	Toronto Blue Jays	TOR	537.0345	29.05676	101.26565	380.5477	341.7285
## 449	Colorado Rockies	COL	624.5895	27.68396	89.87027	280.0276	255.4802
## 606	Pittsburgh Pirates	PIT	759.7236	27.53397	86.80659	280.6244	255.4652
## 418	Chicago Cubs	CHC	748.9566	28.19248	83.21681	280.6301	254.0066
## 550	San Francisco Giants	SFG	785.8762	29.22141	81.75546	262.1221	235.9846
## 62	Milwaukee Brewers	MIL	545.6774	28.20137	96.15596	319.5506	278.1440
## 371	Milwaukee Brewers	MIL	568.1257	29.35398	98.10531	326.3314	290.8071
## 106	Cincinnati Reds	CIN	710.5614	28.06224	81.22185	251.7701	226.5881
## 184	Houston Astros	HOU	476.7916	31.07046	100.78228	324.5084	282.9127
## 188	Minnesota Twins	MIN	652.7985	27.87272	102.68265	394.3830	353.3567
## 321	Oakland Athletics	OAK	579.4103	29.01004	96.66352	377.1092	336.9073
## 539	Los Angeles Angels	LAA	838.1267	29.82996	104.21689	391.5639	349.4899
## 186	Los Angeles Dodgers	LAD	597.2736	29.29553	93.10739	303.3960	269.6748
## 307	Baltimore Orioles	BAL	873.6633	28.68955	107.94925	428.2728	386.3684
## 590	Chicago Cubs	CHC	642.8371	28.21943	89.42044	288.7253	253.5909
## 485	Minnesota Twins	MIN	867.5720	28.14286	110.38333	425.3577	385.9536
## 573	New York Mets	NYM	725.3307	28.29978	80.60174	264.3730	232.7686
## 254	Baltimore Orioles	BAL	744.5886	30.41431	114.27063	448.1887	401.2066
## 34	Houston Astros	HOU	387.6246	29.58683	103.28945	374.7101	327.6751
## 131	Cincinnati Reds	CIN	587.2690	27.82111	91.96182	302.8190	264.8949
## 536	Detroit Tigers	DET	676.7047	29.47193	102.03743	386.4474	349.9105

##	487	New York Yankees	NY	745.0986	31.07632	115.19610	433.6345	383.6524
##	338	Cincinnati Reds	CIN	658.8353	28.98760	96.45766	318.6142	282.5573
##	94	San Diego Padres	SDP	720.8852	28.52485	83.19537	273.8102	241.6131
##	343	Los Angeles Dodgers	LAD	536.4615	30.24562	87.39317	283.6944	252.0315
##	204	Chicago Cubs	CHC	674.3175	29.43548	94.10510	312.6501	283.1596
##	104	Chicago Cubs	CHC	754.3289	30.22341	84.16295	268.3272	232.3915
##	107	Colorado Rockies	COL	748.7800	28.44076	82.38344	269.2183	238.1248
##	457	New York Mets	NYM	728.2363	28.49512	88.38830	293.4619	261.5310
##	366	Colorado Rockies	COL	724.8063	28.70728	83.71029	266.2703	233.9367
##	515	New York Mets	NYM	633.7690	29.13116	81.35923	241.6299	215.7402
##	410	Tampa Bay Rays	TBR	891.4684	29.84130	103.61834	377.1993	331.1653
##	426	Miami Marlins	MIA	797.8704	27.97961	79.63344	247.0335	223.7685
##	564	Colorado Rockies	COL	714.8396	28.74903	97.44873	323.1935	290.2287
##	174	Toronto Blue Jays	TOR	681.1547	28.57235	113.25073	442.1605	392.1412
##	596	Kansas City Royals	KCR	785.2287	27.53639	100.07645	401.7382	362.3596
##	391	Chicago White Sox	CHW	750.6366	29.79253	115.98518	454.2928	411.6544
##	273	Seattle Mariners	SEA	590.1659	29.59830	125.76591	486.5972	446.0176
##	206	Cincinnati Reds	CIN	585.9488	28.65982	89.54744	301.6327	264.1600
##	215	New York Yankees	NY	778.5020	32.52282	124.70704	489.9352	427.8034
##	412	Toronto Blue Jays	TOR	590.5600	27.95821	103.81194	404.8484	362.8048
##	360	Atlanta Braves	ATL	713.6039	28.80044	92.62266	299.1678	269.1041
##	345	Minnesota Twins	MIN	813.5711	28.46475	109.19036	433.0212	386.1140
##	568	Los Angeles Angels	LAA	913.5171	29.32800	93.22629	355.3097	315.4497
##	603	New York Yankees	NY	956.5398	28.26140	96.13678	382.9167	343.0310
##	253	Atlanta Braves	ATL	776.4317	27.92383	95.98350	317.1515	283.2785
##	349	Philadelphia Phillies	PHI	781.7164	31.71282	95.12912	323.2881	286.0721
##	593	Colorado Rockies	COL	737.4474	28.36103	91.39302	302.4894	273.3195
##		R.bat	H.bat	X2B	X3B	HR.bat	RBI	SB
##	617	18.37598	34.87676	6.780031	0.4352574	5.173167	17.72699	1.3213729
##	173	56.27053	100.60425	17.776137	2.6987596	17.335499	55.54932	4.3012404
##	240	45.28336	77.62189	16.812722	2.4061388	11.129893	43.64324	8.8242883
##	168	33.59811	67.18804	12.235800	1.9716007	7.499139	32.41910	3.6127367
##	36	27.83045	56.37455	8.714545	0.9800000	7.030000	26.52273	6.2559091
##	234	61.94746	114.82763	22.504132	2.8842975	15.549587	59.22373	4.6953955
##	129	37.44864	69.90167	12.966198	1.5917471	11.492537	36.02678	3.2967515
##	29	43.60881	77.01325	12.390338	1.7960667	11.715690	41.10859	3.6973065
##	657	38.67258	60.74186	11.250309	1.1051546	11.318763	37.22268	2.9620619
##	166	60.09748	108.45097	24.620669	1.8931298	13.658837	57.27951	3.9154433
##	472	45.69433	84.65313	15.084776	1.0304478	15.300299	45.28836	3.1528358
##	407	34.42096	72.23818	14.301236	3.0059651	4.999574	31.85513	6.1913081
##	46	59.61335	106.74281	21.891830	1.8411968	17.673188	59.08458	8.7462601
##	528	38.14705	65.15006	14.797758	1.7727469	10.366537	37.11298	5.0030185
##	124	56.04016	106.02008	20.851979	2.3637407	14.966724	53.39759	11.1962134
##	592	32.25392	61.08712	10.881916	1.2225434	10.530553	30.83650	3.5689513
##	586	40.52317	72.02780	14.390901	2.1743892	11.350885	39.11668	4.5711879
##	601	62.25816	103.81899	21.365579	1.4783383	20.850445	61.54777	1.6706231
##	612	53.61850	90.88452	19.163241	1.7158404	14.614268	50.32164	9.8446191
##	61	44.45831	82.40243	14.336638	1.3420460	11.357819	43.05813	9.9918882
##	216	55.65660	107.56350	22.451295	1.2996301	11.096178	53.50986	2.5117139
##	462	22.65363	50.01762	9.629566	1.2737430	4.711216	21.32746	3.7941556
##	583	53.17998	92.60667	19.108462	1.6960667	14.560787	50.89928	5.1269368
##	346	31.14323	63.25669	12.445643	1.9551337	6.408542	29.90035	7.1427955
##	458	40.84393	86.66313	14.793875	1.8144876	9.411072	37.95524	8.3551237
##	630	19.08535	33.40741	5.607085	0.1513688	6.763285	18.93720	1.0837359

##	510	47.75860	92.76706	17.622109	1.4461365	10.765369	46.13424	5.0530175
##	613	44.68223	80.68951	16.799272	1.3656762	15.844148	44.87326	2.6646452
##	635	15.62748	30.67550	5.572848	0.3526490	4.531457	15.37086	0.9023179
##	429	26.26823	55.34542	11.027719	1.4426439	5.553092	24.64861	5.0869936
##	339	37.24233	70.07283	13.050256	2.7721465	8.916525	36.61670	4.7321124
##	354	37.78222	72.37672	14.497423	0.8664089	8.308849	35.16151	4.4673540
##	400	51.15959	103.83981	19.711165	2.0303398	9.912015	48.58495	9.0946602
##	141	52.09347	97.10923	18.378378	1.7370495	13.974662	53.46678	2.8237613
##	567	39.39899	84.48005	17.613046	1.5794807	9.524383	37.11400	8.7295757
##	91	65.53637	105.26710	20.098263	1.4125950	17.373507	65.25950	2.7301846
##	251	33.49102	63.36899	15.046803	0.8061011	8.089010	32.02006	5.8215629
##	171	62.19441	117.39180	22.681926	2.6117717	11.504756	59.45838	9.2229489
##	347	64.91723	109.94728	20.648526	2.3939909	15.526077	61.37018	7.9047619
##	319	28.73516	60.84323	12.243059	1.9060231	3.899188	25.44425	5.2695429
##	372	35.68387	76.83096	14.496441	1.4454330	6.163108	33.08185	5.5504152
##	320	67.34650	119.24861	24.066741	1.4961068	18.711346	65.18799	7.8058954
##	428	38.05205	83.20643	18.159649	0.8678363	9.716374	37.42573	3.4274854
##	566	56.17801	98.73938	20.170448	1.0668994	14.471204	54.11053	5.0762071
##	359	37.61083	67.04506	14.830223	1.9535731	8.756031	34.02822	7.3509331
##	547	31.98681	64.57300	13.764292	1.6547933	8.195251	30.05013	2.9863676
##	159	45.30527	80.20791	16.963861	1.5573980	11.061650	42.30060	3.7933673
##	77	46.25933	87.47780	18.574896	1.1308467	10.809355	44.21314	7.6358792
##	108	50.51166	100.25175	19.687646	4.3479021	9.405012	47.29312	10.0839161
##	624	21.77924	37.99671	8.153213	1.0247117	5.390445	21.12850	1.7084020
##	76	44.53214	81.28348	14.971429	1.3602679	10.930804	42.88527	7.9084821
##	653	47.03069	88.43081	16.157040	2.2629362	11.611312	44.99940	5.6961492
##	117	45.55043	85.79240	17.916327	1.8964270	10.620081	43.49525	10.3658978
##	207	32.76140	65.43860	12.755702	1.4855263	6.742982	31.47851	2.8324561
##	460	34.24342	73.84396	13.057512	1.5755684	7.177887	33.05617	6.7788676
##	442	25.84729	57.79758	11.099418	1.8410210	4.967309	24.72459	3.5333632
##	370	31.13087	67.91568	11.547211	1.4628898	6.049627	29.71805	6.4071146
##	152	49.60329	102.45216	18.644119	1.5667276	11.024375	49.38026	5.2175503
##	257	44.34874	85.95318	16.343938	1.0126050	13.822329	45.82593	3.9315726
##	484	30.01709	62.15634	12.079453	1.5288338	6.948740	29.18753	4.3169586
##	574	59.84858	96.29921	18.960630	1.7571169	18.571775	57.28770	4.7783162
##	554	59.37522	97.36808	18.606313	1.6039309	18.047647	56.37284	8.9118523
##	392	37.14207	73.37825	15.919141	1.6637734	9.850160	34.67565	4.9725902
##	192	46.53465	81.59342	16.628070	1.3521930	11.979386	43.62500	6.1763158
##	265	52.08402	101.62959	19.978698	2.5171598	9.352071	48.86272	7.9757396
##	275	46.95402	85.48312	16.965076	2.0343423	10.123981	45.44063	5.6466822
##	286	57.15854	107.36583	20.463300	2.7269524	14.135643	55.50910	4.2853787
##	134	39.91109	75.53517	15.341821	1.5826500	9.565386	38.89728	3.6849374
##	69	34.40570	63.57301	12.560664	1.1191997	7.486590	32.16603	9.6428267
##	155	54.95056	100.65562	21.608989	1.1926966	16.687640	55.67191	5.0674157
##	7	52.47880	90.46319	15.328871	2.0852298	14.399375	51.17715	8.3092369
##	436	40.45045	85.99459	16.654054	1.0672673	12.279880	38.97598	3.1381381
##	389	40.49588	80.37412	19.034118	0.7211765	9.872941	39.98353	5.2958824
##	490	38.01757	77.85153	15.666667	1.4433292	7.980343	35.34295	5.8205772
##	673	29.54247	54.41357	10.225779	0.7148954	7.810926	28.22663	2.4139991
##	88	50.53851	101.84655	21.767837	3.7010193	8.003398	48.18347	6.9229898
##	287	39.12516	76.43917	15.532279	1.2872200	9.235837	37.09794	6.5019763
##	414	33.85460	71.07856	14.842014	1.4457465	6.957031	31.96267	3.1736111
##	219	31.10123	62.95959	11.977456	1.7894513	6.121650	29.81327	4.5155253
##	21	67.90495	113.50598	22.611269	1.4422311	20.133751	65.85145	6.2544109

##	471	26.45261	61.61826	11.333043	0.8217391	4.030000	24.37217	3.3491304
##	513	33.04429	63.29961	12.474164	0.9500651	10.160226	32.25792	9.6517586
##	232	36.13233	66.82931	13.700431	0.4879310	10.839655	34.44957	6.1323276
##	250	59.57837	116.64257	25.289763	1.9895894	14.901099	57.85078	5.1191440
##	292	41.66765	74.78514	14.034410	2.2005875	9.703315	39.28368	7.8510281
##	659	31.89734	53.69033	10.894381	0.6962400	8.413181	30.08407	3.6147022
##	164	27.93405	57.78244	11.914775	1.1109208	5.298073	26.39615	3.2047109
##	521	34.80574	69.36318	13.560389	2.8762669	6.265203	33.03843	3.6148649
##	244	35.76806	74.59661	14.822454	0.8637946	7.550044	34.12272	3.2415144
##	584	43.03826	81.51130	19.589565	1.0614493	13.875362	42.48580	2.7820290
##	79	36.96483	68.57664	13.466782	0.9991316	8.797655	34.65089	5.3899262
##	122	44.89642	81.40656	14.966767	1.8191627	10.704359	41.85801	5.0410013
##	652	38.63151	69.11458	14.429253	1.7100694	9.576823	36.74089	4.4088542
##	4	34.77707	71.17008	13.538789	1.9782609	6.730179	32.79881	5.9411765
##	660	43.74432	78.17938	15.863133	1.1019220	13.613279	42.25160	3.1613279
##	644	28.72826	56.01706	13.368706	1.5297545	5.957137	26.86309	1.8098211
##	433	33.00429	67.85457	14.119691	1.8730159	8.859717	31.66967	5.4800515
##	618	21.31658	39.71692	8.765494	0.4338358	5.829146	19.66332	2.3936348
##	600	38.87075	68.32536	14.057942	0.7743112	12.737439	37.13614	5.1474878
##	305	35.37434	67.47751	14.488095	2.2852734	9.046296	33.21164	5.3589065
##	236	45.12746	90.24241	20.128052	2.3126861	7.365098	42.55926	3.8415724
##	448	32.26057	68.09145	13.071232	1.2247243	7.329504	30.60064	7.6810662
##	540	38.10429	66.52350	15.580791	1.0515251	11.188376	36.03957	4.0927453
##	20	44.56021	78.12696	15.015707	2.1719023	9.986038	42.40489	7.5261780
##	325	32.79886	70.59335	14.643638	2.0039353	6.521644	31.56275	3.7673808
##	100	43.30576	78.20299	15.044776	1.8119403	11.499360	41.68870	3.7646055
##	111	41.08813	74.49070	13.673162	1.4455270	11.785208	39.73029	4.9105403
##	637	20.32106	37.07216	7.848306	0.9558174	5.717231	20.61414	0.9823270
##	323	26.07802	54.87058	11.774208	1.6108307	5.044975	24.55301	3.3932997
##	591	49.46834	98.88471	18.352449	1.4659498	12.641577	46.56093	4.6714456
##	223	70.03527	124.36696	25.651609	2.2227723	21.846535	68.95916	5.6058168
##	60	63.01521	118.03569	22.500293	4.2328847	11.076653	59.28906	9.5734348
##	507	55.36978	107.29218	18.595532	1.7619048	16.372134	53.87713	4.2175191
##	394	53.34120	108.85773	20.874262	2.4728453	13.602125	55.01948	3.8034238
##	5	53.11373	100.13038	17.691557	1.8931648	11.075818	50.45434	7.4279150
##	537	65.10316	115.70125	25.661896	1.4424568	16.878354	60.81276	7.4901610
##	59	43.87740	73.97987	15.704026	0.9702653	9.037511	39.85407	9.1578225
##	514	45.13102	86.06764	17.466789	2.1620963	12.962218	43.44729	5.6800731
##	397	26.26354	55.74033	10.875322	0.7970765	5.108770	25.34609	3.6960447
##	260	67.26604	124.99294	26.404944	3.9670394	13.566804	64.43849	7.8575633
##	201	39.92331	72.70401	15.477811	1.9185696	9.867729	37.17492	5.5092632
##	276	52.85836	101.22582	24.512514	1.7463026	12.357793	51.61661	3.9761092
##	664	35.65658	62.00256	12.879847	1.0707286	10.177248	34.53899	3.7809970
##	619	19.59851	31.29701	5.983582	0.5328358	5.688060	18.40000	1.5059701
##	534	44.22616	80.77953	14.455818	2.2257218	13.051619	42.40026	7.0678040
##	417	59.97212	110.86477	25.780546	2.0794781	12.475089	57.67616	8.9483986
##	262	48.19003	97.84936	20.191194	3.5220162	6.514484	43.13673	5.8256083
##	598	43.94926	68.63087	14.728541	0.9890063	14.329810	42.71374	2.8668076
##	255	67.25810	121.24750	27.579847	2.3995286	12.866235	64.82675	7.4814378
##	71	57.67518	98.83702	17.341283	1.3872800	16.727428	54.93526	9.2174901
##	191	60.61976	118.34790	25.683234	1.1766467	14.551497	56.88683	3.9035928
##	182	42.14150	75.25367	16.594478	1.5427092	10.749784	40.60440	2.3395168
##	39	35.10877	72.95615	14.627257	1.2257094	7.045572	34.18831	3.1573517
##	597	48.87041	85.72993	16.801032	1.3881881	14.090596	45.24599	4.2838303

##	647	59.98696	104.51986	23.982810	1.4273859	16.663308	58.50800	2.7320688
##	383	65.20549	121.71402	23.881098	2.2329268	16.060366	62.06280	10.7237805
##	504	48.73935	101.71896	19.389129	2.3279802	12.839407	48.60161	5.3878938
##	183	56.31298	104.54610	19.772754	3.7017029	14.324134	56.38873	5.4914856
##	89	38.84387	70.49560	14.208455	0.8317288	10.584345	38.68481	2.7187108
##	473	47.94988	97.85263	20.146181	2.1861575	10.676014	46.85800	4.7852029
##	90	57.75723	101.40231	20.041618	1.7323699	13.210983	55.80173	6.5098266
##	424	46.76109	106.46127	18.383205	2.3240686	8.519811	46.65642	9.2158486
##	252	35.97020	67.83655	13.963628	2.1056091	9.127520	34.71429	6.8352323
##	496	48.17346	94.78231	18.527283	2.1941413	10.740379	47.41700	6.2228604
##	463	33.75809	71.99569	12.898232	2.4855541	6.809401	32.36826	3.0802070
##	535	45.77888	82.36153	16.075569	2.2086733	11.479176	44.45642	3.2133963
##	199	48.01221	95.22466	19.132479	2.2350427	9.854701	44.83455	4.3467643
##	87	36.91538	67.75275	14.153812	1.3851917	9.123843	35.62847	3.8166593
##	197	46.11737	80.74703	17.136017	1.2741525	11.944915	43.76102	6.1012712
##	291	58.39275	110.81818	21.217469	3.4194890	8.318479	56.08081	7.1051693
##	432	27.96743	61.77289	11.906250	1.4498239	6.477553	26.18574	3.9084507
##	336	34.08381	69.36068	14.861343	1.3751645	8.022378	32.74111	2.8100044
##	651	42.15133	72.81961	14.130751	1.5998789	11.899516	40.33777	6.8722760
##	157	43.10377	73.77058	16.765437	1.6453688	10.742710	43.21012	2.9485420
##	331	33.91719	64.64428	12.801014	1.6231517	8.290663	33.04901	2.4228982
##	571	35.27780	64.32424	11.638289	1.0260692	10.536049	33.57637	6.0126273
##	74	59.79552	104.29946	22.309740	0.8681186	14.803388	58.86570	9.3520871
##	640	18.43778	29.99100	6.710645	0.8290855	5.020990	17.29835	3.0374813
##	524	43.14551	84.34611	18.600599	2.1161677	14.852695	42.56647	3.5718563
##	72	40.82370	71.53059	13.293543	1.2259983	10.512744	38.00127	7.1954121
##	447	45.32379	95.41730	19.104033	2.3097604	10.865576	43.16072	5.5803624
##	670	56.10092	87.19151	18.682913	2.3446101	14.815367	53.45585	6.0642202
##	64	46.97002	83.12406	16.190674	0.6702748	10.026644	44.18693	8.2681099
##	363	34.78315	75.08255	15.136014	1.8990590	8.226262	33.46065	3.7177074
##	399	40.92986	73.00378	15.601008	1.8723226	10.890382	37.16590	8.9197816
##	115	61.84693	114.56879	22.368076	1.5056581	16.044074	59.57058	13.1870161
##	650	37.78739	65.04038	14.292542	0.5916770	11.537701	37.95921	1.6489493
##	493	44.56215	94.15230	17.722844	1.4647256	14.062710	42.72900	4.1298992
##	66	59.18712	92.71740	18.800873	1.2825968	16.627387	57.70322	3.7986907
##	421	32.37794	68.28596	13.051874	1.5183086	7.806016	31.46469	4.9742807
##	148	52.94731	92.69395	17.814462	1.5986547	16.108184	52.56614	3.3077354
##	559	33.35097	72.89536	13.520282	0.7860082	10.653145	32.95532	3.6131687
##	385	31.84872	66.29692	13.211964	1.1694842	8.415258	30.07109	5.9700910
##	302	56.54599	102.07252	23.296580	2.1998821	11.794811	54.15212	5.5353774
##	437	45.06525	86.05402	18.759291	1.1616249	7.301642	42.85609	2.4926534
##	452	49.46380	113.81577	22.412007	2.2366098	7.425544	47.61095	11.4479105
##	290	42.81386	80.70652	18.220562	2.1770833	11.938406	42.60507	6.2500000
##	226	41.77063	79.53327	17.821650	1.8181012	8.661934	38.59938	4.0820763
##	621	16.59940	26.47741	5.177711	0.2620482	6.349398	16.19277	1.4879518
##	53	58.75511	108.03741	23.670953	3.1186441	12.842198	56.92811	4.9135009
##	154	33.81927	65.21714	14.209591	0.8015098	8.408082	32.14609	2.7611012
##	667	33.20997	56.26295	11.211538	1.0949765	10.203689	31.95683	2.8033752
##	301	51.16280	96.86790	19.453071	2.6413673	11.422943	48.42121	9.7421784
##	497	59.56028	97.03100	20.074627	1.2462687	17.132032	59.20379	5.6188289
##	309	33.86336	65.85216	13.702155	1.3853448	7.797845	31.90819	3.0081897
##	585	37.06229	64.27201	13.200997	1.3044020	9.196844	34.08264	6.6486711
##	409	39.09160	77.61292	14.396792	1.6276910	8.834107	38.48670	4.5179401
##	373	31.56796	64.61227	13.538134	1.7592671	4.472944	28.87090	6.4784832

##	67	47.45327	86.32163	17.077666	2.5603335	9.319438	44.60728	7.4931988
##	614	46.65588	75.69698	15.976388	1.5732401	12.380411	42.45431	6.6261478
##	322	50.36945	86.47602	18.505329	2.2588810	14.032860	49.07149	7.9564831
##	636	24.14531	37.23281	7.171875	1.0078125	7.312500	23.04062	4.2390625
##	202	48.71123	99.85648	20.771991	1.8478009	12.998264	47.57465	5.5839120
##	582	39.79766	80.57836	15.680702	2.4654971	7.931579	35.72690	8.2959064
##	405	31.72141	64.06019	11.807395	1.6083405	9.194755	31.96088	3.3594153
##	218	33.28420	70.72374	14.232127	2.0044131	6.765666	32.09003	3.9015887
##	68	40.80242	72.36559	14.768369	2.2298387	9.964606	39.11111	5.7840502
##	303	46.85227	94.07004	19.767510	2.1771630	8.181283	43.76045	5.6703943
##	310	48.84679	95.90336	15.910430	1.3624042	12.695934	47.20389	7.1756040
##	544	29.84743	54.16235	11.532087	1.1321717	9.178071	28.78496	2.5728857
##	238	36.46868	67.98857	14.739826	0.9094650	9.521719	33.71148	3.3987197
##	615	19.18740	35.50083	7.661692	0.8739635	4.411277	19.41294	1.5406302
##	181	37.81421	68.65026	14.136130	1.3732877	9.873716	35.12286	4.2367295
##	562	45.80119	91.76250	18.623810	3.0160714	12.453571	43.73452	7.4541667
##	341	29.44746	63.27519	12.004737	1.1546081	5.642119	28.36090	5.4827735
##	446	26.84678	56.46051	11.917566	1.2788088	7.146741	25.41303	2.4643936
##	137	29.73648	63.56512	12.293812	1.3846820	6.659022	27.21549	4.8398961
##	374	66.85101	109.66087	20.469565	2.8446377	17.234203	63.49217	11.7472464
##	672	61.42206	104.97748	20.015589	0.8464203	20.100462	60.84180	6.0554273
##	23	51.85437	99.18675	19.586522	1.8206739	12.667619	49.60080	4.1844660
##	213	45.66082	93.14444	17.791813	2.2000000	9.418713	42.31579	6.6491228
##	443	32.74482	74.36429	13.997295	1.3354373	7.521190	31.89991	4.9355275
##	381	37.34529	74.90165	14.910089	0.9670747	8.489658	35.44365	2.5643732
##	212	41.19281	79.80309	18.608004	0.9290587	10.177353	39.06548	4.0941337
##	494	32.66568	69.01731	14.442381	1.7902068	7.173491	31.16969	3.7804981
##	542	37.79614	69.10361	13.528943	1.1518456	11.744128	35.83599	6.7558725
##	280	59.77733	112.21053	25.189705	2.2192019	13.599190	57.27704	6.6946212
##	431	52.48002	95.48059	20.728311	1.8356164	13.070776	49.98573	5.2773973
##	18	33.54890	67.80705	13.416300	2.5651982	5.572687	30.73480	8.5000000
##	312	44.07576	76.26388	16.587602	2.7731382	10.877744	41.51700	5.6470082
##	278	37.33319	69.11047	16.127265	2.6690234	8.526734	34.92444	3.2461335
##	556	38.65499	69.61909	15.003940	1.1370403	10.803853	38.74956	4.8003503
##	180	58.37478	99.53065	19.434326	1.1786340	17.058961	55.80560	5.6841798
##	209	39.46795	78.55604	15.872220	1.6546010	9.582207	36.60706	6.8190144
##	19	41.42839	79.17472	14.398188	0.8610871	8.037964	40.29940	7.2726488
##	177	62.65044	118.81877	23.965396	1.2780059	13.187683	60.97009	7.0967742
##	150	31.54307	63.70835	13.235680	2.1530389	6.952339	30.77613	3.2802798
##	476	33.32957	70.39217	13.708261	1.1543478	9.161739	32.34391	7.2521739
##	109	51.33138	88.73715	19.080252	1.7944094	12.721821	48.55140	3.8358882
##	470	37.47219	76.15032	14.876858	2.5893843	7.867516	34.32187	7.8662420
##	627	27.37520	41.00326	7.463295	0.5040783	9.375204	25.75530	2.3898858
##	93	40.60362	73.23854	15.602734	1.6000882	8.604497	36.95944	4.5947972
##	445	36.82936	78.58174	16.238067	0.8973747	7.670048	35.28282	3.1718377
##	84	47.43581	76.33319	14.636245	1.6545852	13.310480	46.01179	5.3737991
##	456	43.35774	84.54107	19.704167	1.4779762	7.826190	40.16726	5.1892857
##	382	50.87037	95.19387	20.298032	2.7222222	12.400463	49.46528	11.2905093
##	50	51.72261	86.77669	16.411655	2.7482517	12.585082	49.01259	8.3268065
##	416	60.38999	117.63894	24.605184	0.9614225	17.553948	59.07957	6.1802291
##	92	33.86079	64.33841	13.801253	2.0971352	7.228738	30.97672	5.6432408
##	641	14.02163	26.49085	4.549085	0.5657238	3.663894	12.46090	3.0881864
##	530	52.42026	102.95394	18.712723	0.7818077	17.207254	51.49568	2.2055268
##	247	60.07805	122.66608	21.129108	3.3802817	13.845070	56.75587	8.5357981

##	196	45.22037	103.87975	17.709436	1.5017261	8.642117	43.06099	8.1530495
##	314	36.56705	80.09056	15.379474	1.8973696	8.226391	34.91203	7.3285899
##	665	25.49427	52.95117	10.160934	1.5936306	5.126539	23.65732	2.4547771
##	594	32.29072	75.33805	16.381684	2.1899201	8.580209	31.99078	3.0344192
##	379	21.82178	50.14802	11.098256	0.8149724	4.951085	20.89409	3.0484900
##	272	32.99108	69.21972	13.301742	1.5159371	6.890353	32.51084	5.4487888
##	96	63.04563	103.03775	21.197746	1.4343662	14.096338	62.35549	8.3774648
##	351	31.21168	62.91112	10.919279	1.1468441	6.514813	29.29927	5.9982825
##	98	52.23519	97.29727	19.654328	2.3320046	10.936219	49.64123	3.7164009
##	264	42.79651	76.34205	16.352941	1.8849673	12.946841	41.51852	4.7960784
##	506	43.05168	77.02842	15.792851	2.2734711	10.696813	40.37597	3.2024117
##	47	41.12620	69.83974	14.028821	1.3502183	12.417467	40.58384	6.5781659
##	172	46.27034	82.37712	18.317373	1.3122881	11.067797	44.12500	4.7576271
##	411	66.93019	126.51611	25.232697	2.6103819	16.491647	63.86874	7.6610979
##	151	53.75290	92.83612	18.621193	1.7644788	14.171600	51.18833	4.3903904
##	103	50.66509	95.49793	20.215594	1.9893680	13.308328	48.95452	2.8298878
##	378	25.46170	53.68804	10.141566	1.8119621	3.543890	22.31756	8.1204819
##	268	46.57307	89.40873	18.023651	1.0224378	11.235901	44.49424	3.4366283
##	11	39.26964	78.53045	12.801412	1.4929391	10.699470	38.95896	6.4240953
##	45	42.99349	77.07248	15.159722	1.4223090	8.405382	41.42839	5.4340278
##	365	37.36274	71.20095	12.977194	0.9466437	9.447074	35.00602	5.7822719
##	139	36.43954	74.08443	12.611795	1.1412813	8.331778	33.56767	4.7581672
##	575	62.45476	108.22738	24.917744	1.2391304	18.245006	60.97239	2.2884841
##	671	40.59177	82.09699	14.275015	1.5107428	10.556783	38.83917	6.8950276
##	604	62.42378	100.25015	21.155974	1.6962919	19.314891	57.98764	3.8145968
##	187	35.18988	73.34214	16.057770	1.8271384	7.297358	32.29557	8.5391850
##	16	41.26407	78.97024	15.516775	1.1125541	11.167208	39.89665	3.6985931
##	565	41.42737	86.96399	19.197479	2.2593037	9.314526	38.76291	4.7058824
##	607	34.31313	63.15404	11.099747	1.1548822	11.311027	33.35859	3.7171717
##	413	37.22853	73.40416	15.220295	1.3321769	10.124024	34.76713	5.6730269
##	185	38.63213	78.86389	14.507051	1.4488044	8.166769	36.44697	3.6008584
##	477	35.35893	69.64149	12.929883	2.2404007	9.416945	34.09349	5.3685309
##	500	30.36073	63.98978	13.649063	1.1988927	5.965503	28.12905	2.9778535
##	145	42.63819	77.95617	16.054562	1.7629696	11.720036	42.06977	3.6042039
##	337	56.39055	110.06639	19.461722	1.5651914	13.007177	53.33672	13.1860048
##	51	46.18688	79.19594	16.899871	1.2870091	11.418213	43.24299	8.3478636
##	406	32.10504	65.35875	13.476069	2.0050826	6.201609	30.10758	8.2964845
##	377	26.78108	56.23337	12.299050	1.4857497	4.966130	25.79637	4.7798430
##	116	67.63920	113.45321	25.778693	1.5732784	15.557387	63.69335	5.6662743
##	113	55.91721	108.10185	23.014890	2.7004169	11.832043	51.07207	11.0935080
##	311	28.08282	55.21735	11.737511	1.0280456	6.874671	26.80587	4.4272568
##	25	36.63350	73.35354	13.022212	2.4715410	9.024063	34.71772	4.2174919
##	2	56.41166	104.39108	18.780446	1.6769583	13.706118	54.87993	4.3276158
##	266	39.96932	74.65514	14.646500	1.4140017	9.123596	36.74589	11.3366465
##	560	62.37463	107.24134	25.498532	2.3687610	15.414563	59.33412	9.0810335
##	393	32.40949	64.54182	12.811486	2.4794007	7.178943	30.49438	4.6034124
##	454	35.38231	77.12495	14.370436	1.9115706	7.000440	34.25253	3.2868456
##	631	21.23994	40.21672	7.735294	0.5557276	6.260062	20.16254	1.2105263
##	355	57.11262	95.05546	21.129598	2.8319185	11.238257	53.59083	13.8268251
##	221	49.86093	97.13966	19.532115	2.3453153	10.196229	47.29876	7.3942251
##	576	35.28654	65.08810	11.769864	1.2610128	9.997530	34.09345	3.4528613
##	395	22.71387	47.99916	8.961153	1.1098580	5.326650	20.08271	5.1545530
##	633	19.68429	30.82212	6.458333	0.8253205	5.323718	19.63141	2.1650641
##	249	61.37058	118.09187	26.942272	1.7746741	13.456238	59.58473	3.8206083

##	277	34.21624	72.40072	16.538987	1.4304662	6.465836	33.19936	3.5687299
##	529	34.75536	70.86547	14.120823	1.1525278	7.401885	32.66195	3.5574122
##	459	45.76095	84.94398	16.168053	1.8935108	9.609540	43.58458	4.7748197
##	662	43.95732	81.59746	13.315456	0.7341407	13.826413	42.71569	3.5478662
##	451	41.14609	87.87120	15.999404	1.2122838	10.813953	39.19201	9.0190817
##	348	43.43944	91.97016	18.207724	2.1626682	6.668227	40.18607	10.6951434
##	526	55.81818	98.90509	20.187536	1.2755860	17.014866	54.89823	3.5717553
##	638	18.42546	29.87437	5.695142	0.2763819	4.492462	17.40704	3.3316583
##	35	47.98607	96.59954	17.316309	2.8711550	9.472432	46.07313	9.6088218
##	489	28.91583	64.36914	12.375712	1.6742657	5.952214	26.84480	4.2840859
##	654	61.05733	105.03428	21.381797	0.8900709	15.771277	57.69858	3.3108747
##	229	55.89661	102.50847	22.302825	1.0604520	13.632768	53.83503	2.9983051
##	646	43.98054	84.88915	17.535967	1.0913915	13.814269	42.26415	3.9339623
##	317	40.37549	73.89234	14.594748	1.9326039	10.227133	39.87702	3.5404814
##	425	30.53162	68.56912	13.487571	0.7540340	6.520279	29.89533	3.2254688
##	488	46.81917	97.43169	18.429966	3.0688863	10.053961	44.42652	5.7629162
##	99	65.83427	118.40997	25.845483	1.7264798	20.505919	65.87103	6.4018692
##	205	57.30991	111.11952	19.593994	1.7711712	15.845646	56.09309	10.0324324
##	533	46.29280	94.79976	17.306715	2.6485178	12.455535	44.62371	4.5656382
##	81	40.80491	75.72179	14.822136	1.9638243	10.388889	39.71792	4.9720069
##	1	43.93112	81.21309	14.975893	2.0443392	9.982350	42.50839	6.2061989
##	367	54.42564	106.14587	21.102564	2.3207977	11.874644	52.42735	3.4358974
##	283	62.77752	110.02166	22.433255	0.9373536	18.186183	59.64052	4.9104215
##	13	52.20925	101.57399	20.265896	2.8739884	8.645665	48.02775	11.2277457
##	208	47.84898	100.70096	19.594465	3.1161252	11.028881	45.29061	4.8748496
##	527	40.88879	73.32171	14.409532	1.3018535	11.162842	40.25066	5.8623124
##	161	29.64781	70.03535	14.580203	1.4175873	5.880689	28.20901	4.0119311
##	475	46.06254	101.56340	19.272148	1.8477128	10.022003	44.31384	4.8841922
##	512	34.07438	75.74752	13.952893	2.0475207	6.757438	32.78512	3.1909091
##	9	43.11167	75.87472	16.970495	2.0290513	8.016341	39.35225	10.1951884
##	420	41.73342	78.89364	15.881175	1.1855808	9.805964	39.33912	3.4512684
##	289	33.78287	70.58015	13.434690	1.4817642	6.363020	32.08863	6.7930450
##	195	43.70524	77.07897	16.174831	1.7470439	9.998311	42.52407	2.1165541
##	269	47.92698	82.71452	17.615512	2.4026403	12.063944	46.25743	7.4459571
##	335	50.54048	95.33979	22.263398	1.2485747	13.816420	49.50741	3.3557583
##	17	33.92506	68.62705	14.760089	1.5152993	6.047894	31.12195	5.1108647
##	297	29.51903	62.98270	12.320502	1.2357266	7.887111	29.61765	1.3378028
##	666	38.48265	68.33401	14.458963	1.1976317	9.906901	37.03634	5.8844426
##	623	16.21417	30.78913	4.752883	0.8237232	4.120264	15.86820	1.5041186
##	190	69.90099	113.16075	21.587070	1.3907979	18.886430	65.99825	6.7938264
##	295	45.94152	79.81658	16.377787	2.1708035	12.893143	44.40429	7.8792596
##	222	42.25981	78.50392	14.827376	1.4315606	9.185266	38.98692	4.4716652
##	501	58.70554	108.32921	20.528857	0.4717314	20.753828	57.23263	1.1360424
##	464	39.72410	82.51979	15.776484	2.0279395	9.291036	39.39581	5.6181607
##	140	71.50119	121.08701	24.193683	0.7896305	18.311085	68.38200	8.6096544
##	176	41.46655	75.75399	15.326716	1.8912387	9.618904	39.77773	4.5977557
##	558	41.81678	80.58262	17.679795	1.7474315	9.642123	39.87543	5.3291952
##	546	46.06846	82.24517	19.449971	0.7782329	14.818022	44.69339	3.1761264
##	102	42.95463	86.12099	16.532970	1.6436782	8.284332	42.00484	8.4543255
##	12	44.02024	91.29540	19.478118	1.8222101	8.870897	41.26204	6.8654267
##	430	38.53294	81.66588	15.201176	1.6229412	8.407059	37.08471	7.4952941
##	350	28.75775	63.05020	13.700131	1.2732431	6.295504	27.50808	4.8852030
##	516	46.43768	95.89468	16.871270	1.5424225	11.891164	43.21709	5.5359860
##	14	39.69785	74.08927	14.358369	1.2630901	8.496996	39.16953	4.5686695

##	577	34.20772	67.92321	14.698180	1.9636041	7.773191	32.99379	3.9516201
##	403	43.34198	78.81242	15.781062	2.3118215	11.723764	39.87877	8.3612786
##	10	44.50419	85.54048	14.522055	2.0295924	9.812954	43.58124	8.0184255
##	531	53.24091	98.12661	20.671161	1.2948417	12.028722	51.59320	7.5199297
##	342	41.72654	97.05494	17.829012	1.7728395	7.525309	40.60062	5.9574074
##	465	33.76093	73.21372	14.799388	1.1236888	6.107080	31.93794	3.0965909
##	210	45.10592	94.78817	19.230178	2.3041420	8.353254	43.75680	3.6757396
##	132	37.40948	71.11887	13.441201	1.9077834	7.249154	34.51904	5.3705584
##	390	30.07121	62.65386	12.502805	1.9697885	6.689685	28.03712	4.8916703
##	228	57.40896	114.57278	21.087802	1.3871538	12.374779	53.71067	9.1455510
##	271	37.06523	70.15119	16.656587	1.5425486	8.898056	36.00907	2.6509719
##	520	30.29823	55.10660	11.228312	1.0927924	7.829089	28.33664	6.1031506
##	304	25.54711	54.93705	10.776510	1.0485847	4.957752	23.91170	3.6485002
##	133	33.16058	77.83816	15.746851	2.0472292	7.612091	33.46977	3.1227960
##	28	61.75860	108.87366	23.058658	2.5126904	14.480541	56.46870	5.2430908
##	561	40.20310	76.75897	15.359706	1.8919250	9.099103	38.47920	3.3939641
##	200	39.50532	79.13921	16.618135	1.5219242	10.874840	37.68966	4.0928054
##	144	32.07988	66.20034	11.803503	1.4271679	6.922683	30.13413	3.2319522
##	274	32.06994	66.85803	12.562864	0.4966694	6.612823	31.01499	2.3018318
##	376	37.35482	72.83356	13.551898	1.9579332	8.456333	37.08139	5.1828989
##	293	56.34277	107.17110	20.087861	1.5462428	13.156647	54.37168	8.3161850
##	225	30.15914	63.61290	14.668387	1.6012903	5.779355	29.00860	2.0666667
##	444	49.85596	100.66883	18.315230	0.8441558	15.355372	48.67651	2.8872491
##	332	39.69515	73.56698	15.827325	2.1032488	10.583890	38.11883	5.2728082
##	149	56.81747	99.53851	21.426925	2.4784718	13.223166	52.87993	4.9302608
##	628	16.15262	29.13990	4.952305	0.3036566	3.990461	15.74086	2.6375199
##	263	37.23009	77.35499	13.819363	1.7041073	6.375524	34.53353	8.2015926
##	384	45.86943	85.16245	16.842960	1.8369434	12.448857	44.13237	7.0890493
##	388	49.44491	93.13727	18.320891	1.0246839	15.162553	46.62673	3.3485852
##	356	54.05386	106.53396	18.228923	1.7587822	11.189110	51.02576	8.7552693
##	358	33.98653	69.25347	12.866105	1.5768421	7.918737	32.75453	6.0446316
##	130	58.98855	101.36769	20.581676	1.7148885	16.139843	58.81254	4.3628692
##	629	16.28896	27.86989	5.295008	0.3585477	4.921331	15.09228	1.1240545
##	481	45.24410	90.30005	16.414152	1.3867252	13.017005	42.98245	3.8529896
##	83	54.16834	103.25951	20.873043	2.6840045	11.896532	52.79754	5.8159955
##	112	35.06366	63.77046	12.694673	1.3339108	10.928974	35.17497	2.6145518
##	386	38.69698	72.19516	15.840951	1.5987203	9.087294	36.59872	5.3409506
##	455	36.80411	76.71491	16.932663	1.6252733	8.653258	34.68955	5.9864451
##	211	29.68441	57.84714	12.063547	0.8613139	6.801632	28.87162	2.4362387
##	75	40.52429	73.21425	14.261916	2.3790286	9.535179	37.74989	5.3095778
##	97	45.31041	74.30026	13.230159	1.2376543	11.623457	41.29806	4.8342152
##	8	59.05606	103.70137	19.900458	2.2837529	13.165332	55.09840	12.8924485
##	609	42.95033	74.53814	13.665878	1.8214075	13.179775	40.73862	7.4997043
##	491	32.19788	65.90191	13.148195	1.6963907	7.692144	31.92017	4.0900212
##	136	40.36500	83.27441	15.833773	1.6385224	9.076517	39.52946	5.4929639
##	328	60.27542	105.29983	21.851249	2.7239977	15.158629	57.23417	15.5682743
##	241	62.32748	106.60230	21.670872	1.4629731	14.410861	60.89029	9.3230938
##	423	36.11190	78.08893	15.919317	0.8356890	9.249117	35.57479	6.3804476
##	55	57.87214	115.12023	22.148387	2.5929619	12.344282	54.77654	8.3964809
##	581	37.58210	68.84942	12.916667	0.4438944	10.215347	35.97814	3.0169142
##	398	26.27606	56.97539	11.280537	1.8008949	6.248770	25.07293	6.8241611
##	121	70.06588	123.48536	23.269707	2.8496622	13.167793	66.80912	13.4194820
##	580	48.79135	100.58387	18.564582	2.1940386	13.308591	47.91584	5.9900643
##	434	29.11724	62.73319	11.879310	1.3077586	7.074569	26.76552	5.3073276

##	483	30.83717	71.92257	11.498230	2.1570796	5.483628	27.57124	6.6486726
##	56	50.55527	88.26327	17.691471	2.3185379	12.265013	47.01001	10.1914708
##	306	33.65383	66.89788	13.952402	0.8580701	7.108611	32.93682	2.6270013
##	160	59.96193	109.66032	20.549673	2.9898870	11.889352	56.16240	9.4378346
##	569	39.10664	66.12994	14.029226	1.7132701	12.170221	36.58531	3.3799368
##	655	51.93435	101.57737	18.521688	1.9812427	12.702227	50.02403	9.2033998
##	189	27.89373	55.51778	12.056308	0.6888230	8.093141	27.26080	4.0571550
##	261	35.28469	70.94281	14.481918	1.5458368	8.767872	35.26072	3.1984861
##	52	60.05590	109.89046	21.042349	1.6414455	14.522868	57.23998	7.8746471
##	329	56.63128	104.57035	21.445980	2.1739950	16.817839	54.66960	11.1469849
##	658	23.03888	46.06020	8.482860	0.8102007	5.835284	22.52968	4.2316054
##	326	42.00000	92.79975	17.949005	0.9477612	10.935323	40.45958	6.1436567
##	227	44.55114	78.63106	16.291511	1.3879917	12.030642	43.62857	2.8559006
##	509	47.75681	105.85420	18.650333	2.2631579	11.460980	47.91289	7.6212946
##	318	58.74795	109.47602	19.483626	2.8766082	13.179532	56.27076	6.1456140
##	352	34.19855	67.39367	14.282413	1.6384253	8.250321	32.46855	2.9991442
##	579	26.73902	57.79307	11.287162	1.3315034	6.076436	24.83277	3.2964527
##	230	34.72014	73.32799	13.279865	2.4470241	8.035036	32.57535	6.3875053
##	246	38.20348	70.54826	14.610435	2.9017391	8.237391	36.29435	3.5460870
##	563	36.39636	72.64213	12.791032	1.5169205	8.564721	34.07234	4.6611675
##	31	37.18338	70.28767	14.779054	1.4441008	7.202828	35.57004	5.0419797
##	126	39.06906	76.58173	14.873252	1.3199301	9.259178	36.31949	4.5681818
##	313	52.66704	103.22908	17.363841	2.2498596	13.336889	50.48175	5.1931499
##	242	59.24079	108.23280	19.474201	1.6265356	13.633292	56.05037	4.3267813
##	120	40.98278	74.61860	15.297460	1.9668532	12.758932	39.35213	3.0718898
##	101	37.51137	71.18329	13.118985	1.2589676	9.898513	36.81627	3.7755906
##	616	28.19086	43.79935	9.993475	0.2561175	8.598695	27.61827	1.7993475
##	419	41.62220	95.83294	16.508855	1.3258560	10.488194	40.20484	7.2792208
##	557	33.49831	62.63828	12.914840	2.5902192	9.176223	32.40936	3.3701518
##	78	46.42623	87.73497	19.413661	2.0453552	10.314208	45.82186	2.6775956
##	217	44.49955	82.08289	16.244652	1.9509804	9.532086	41.91399	7.5147059
##	43	35.45613	74.70418	14.776757	1.8520900	6.092788	34.17777	9.6417088
##	632	21.30543	31.37364	5.688372	0.4914729	6.443411	20.15504	1.9069767
##	284	32.03740	61.10922	12.135997	1.1797705	9.232894	31.70803	3.8597535
##	552	35.66274	64.69684	13.371368	1.3823158	9.635789	34.28842	3.9701053
##	570	29.55788	63.18094	11.033431	1.2035102	6.432094	26.75345	2.0096114
##	194	41.29159	82.42907	16.588441	1.7955342	7.831874	39.21016	2.5639229
##	661	29.28235	56.80546	10.062185	0.8336134	8.639496	28.76303	2.5436975
##	453	37.52903	76.89892	16.064516	2.1311828	7.372473	36.29247	7.8064516
##	294	42.22079	83.56192	16.905374	1.4304907	8.492407	38.44451	4.9643692
##	156	26.84449	52.37063	9.030670	0.8578834	7.403888	26.76760	2.9736501
##	362	63.49058	118.01531	25.959364	2.5341578	15.165489	61.96761	8.4499411
##	285	36.64104	70.33568	14.609842	1.3435852	8.057996	34.85237	7.5702988
##	578	30.00812	63.76101	12.640872	1.6502779	7.555793	27.97520	4.6019667
##	220	31.52835	69.54167	14.528780	1.2972509	6.084192	30.34192	3.6155498
##	142	40.80341	81.37657	18.351436	2.4820467	9.444794	38.38330	6.6710054
##	15	57.86142	106.60012	20.917792	1.6776277	11.658837	57.92660	6.5748679
##	608	30.23862	58.09430	13.339483	1.1394014	7.471915	29.16031	2.1119311
##	300	40.43130	81.01612	14.699321	1.3129771	9.612807	38.77778	3.7171332
##	163	53.25703	104.45267	21.112450	3.0470453	10.112450	50.44234	6.6138841
##	548	32.84149	65.74957	12.531357	1.7147766	8.242268	32.44802	3.1804124
##	634	22.79114	37.08228	6.436709	0.7626582	6.286392	21.70411	2.7610759
##	555	47.24745	89.33144	18.000568	0.3847900	15.191260	44.53235	3.7196368
##	511	36.29179	68.15856	13.854107	1.0069473	9.964038	34.09277	2.1352677

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## 368 24.34820 57.08832 12.575372 1.1286624 4.140127 24.02166 4.5864119
## 70 45.13055 77.93978 15.860220 1.0021978 10.094945 42.76308 5.6760440
## 239 57.64303 111.77533 19.677592 2.5190703 10.966031 55.00298 7.5691299
## 123 56.49883 97.88746 19.914420 1.2819461 17.167057 55.16706 6.5451348
## 333 34.94920 68.05970 14.399238 1.1875529 6.977561 33.41617 3.0846740
## 138 54.67632 107.64563 24.673422 2.5419803 12.075275 52.32774 5.8517661
## 224 58.98078 112.11415 23.147932 3.0762959 10.797321 56.41642 5.5171811
## 193 37.55343 77.72806 14.395743 2.3527368 7.479149 33.95308 3.9422242
## 645 38.01915 62.89447 13.061277 1.0327660 11.360426 36.25191 3.1659574
## 649 46.10084 79.98139 16.136255 1.1800720 10.987395 44.29952 3.2256903
## 656 42.83679 78.49481 15.710496 1.5155709 11.550750 40.86794 5.3985006
## 135 51.38859 98.42152 20.366843 3.1399177 10.277484 49.36096 9.9541446
## 498 37.16591 70.68994 13.704442 0.6781505 9.844968 35.39438 3.1378060
## 387 40.11849 73.81373 14.813734 1.8348294 8.749551 37.29174 6.4905745
## 439 52.58280 105.81232 18.675770 1.6368390 12.553748 50.13132 10.7733876
## 330 58.73932 111.31807 25.086081 0.8913309 15.597680 57.18010 5.5512821
## 599 27.79364 60.76271 12.092373 0.8533898 7.001271 27.77966 2.1093220
## 467 39.76683 88.24880 15.636418 2.1436298 6.516226 34.79267 8.0474760
## 538 55.55562 112.70000 20.427811 1.9798817 15.276331 51.68817 7.3213018
## 587 45.35336 74.51418 14.394414 1.4299619 13.385104 42.82099 5.0787135
## 175 27.02651 63.09633 12.981882 1.7132125 5.675652 25.60937 2.0433053
## 589 68.40700 115.81983 26.673469 1.9790087 18.924781 64.07405 5.0034985
## 622 19.73239 37.65258 6.006260 1.1768388 4.630673 18.62598 3.2034429
## 518 30.97707 66.60753 11.000000 2.0276936 8.419732 28.87495 5.1073129
## 203 64.92217 112.43091 23.981387 1.5775522 14.930626 62.81275 3.1269036
## 179 42.62688 80.09637 16.281167 1.6109637 13.605217 41.95004 3.8899204
## 422 57.67691 118.38109 21.584107 1.5922274 13.464617 57.57599 2.4640371
## 214 39.98763 77.40880 14.974335 1.9688359 9.551329 37.43813 9.6269478
## 605 38.99749 68.63244 15.712070 1.3541492 10.784577 37.17812 4.0725063
## 178 61.10049 103.59103 23.936791 1.4851432 15.162615 60.43814 4.1853052
## 344 43.31200 82.19382 16.160698 1.7721576 11.178156 41.42480 4.3115488
## 461 36.19048 74.68983 14.897040 1.6971257 8.718576 34.84470 5.7134277
## 440 45.18490 87.07314 16.815097 1.2393212 12.935635 43.82270 6.7355178
## 449 35.60060 72.50829 13.913228 2.0638026 8.554658 32.99405 4.8175245
## 606 35.91246 70.91872 15.087536 1.8441017 8.107128 35.18549 3.0687787
## 418 27.80398 61.16460 14.346903 0.8685841 7.701327 26.63805 2.9022124
## 550 28.88651 62.38501 13.355032 1.3160600 5.458244 26.96702 3.4505353
## 62 42.60668 78.96358 15.923308 1.5295630 8.688518 40.26607 4.3290488
## 371 39.80221 78.78363 15.166814 1.7592920 10.907522 40.56062 5.1694690
## 106 30.14395 61.40178 12.729043 0.9064352 7.414479 29.37595 4.3746825
## 184 43.49114 77.95992 16.161181 1.8531646 10.417722 40.27975 4.3071730
## 188 49.24315 94.34589 19.695776 1.5787671 12.042808 45.87557 7.9075342
## 321 46.92208 90.35301 18.756198 1.1965762 8.334711 44.24793 8.7083825
## 539 45.23250 86.68652 16.253904 0.9577791 12.286293 44.97513 7.8623482
## 186 38.34493 73.92139 11.655069 1.4067869 10.510309 37.01933 5.0588488
## 307 52.34627 105.11343 22.210746 1.2949254 11.261493 50.06149 5.9737313
## 590 39.98283 66.37521 13.249581 1.2236181 12.872278 37.36181 2.4543551
## 485 49.55833 95.95893 20.269643 3.0523810 11.576190 48.18155 4.5339286
## 573 30.92331 56.42527 12.023529 1.6244009 7.807407 28.42135 3.5411765
## 254 55.06290 110.75245 22.488171 2.1517600 10.550490 52.38027 11.0138488
## 34 54.30906 95.82820 19.663399 1.7647059 10.874883 50.00280 10.1895425
## 131 36.25397 68.76319 15.369369 1.1488631 8.409266 33.10210 6.5349635
## 536 46.30468 90.45731 18.713450 2.2321637 12.104678 45.30936 4.2485380
## 487 53.01337 96.76100 18.347075 1.1671309 14.566574 50.95822 4.1871866

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##	338	42.81052	78.50513	15.329341	1.7035928	10.417879	40.23225	5.5384944
##	94	35.11954	64.00343	12.236504	1.8393316	7.686804	32.46744	6.7956298
##	343	32.01620	66.06961	13.483363	1.3931699	6.417250	31.27758	4.6028897
##	204	37.23193	78.19512	17.108647	1.1818182	10.743237	36.28736	3.7188470
##	104	36.30232	63.43482	12.350772	1.3820755	9.440823	34.34863	3.2898799
##	107	41.41868	73.43355	14.256900	2.6365180	9.868790	39.34310	6.7528662
##	457	31.54477	65.34840	13.661791	0.9126773	6.568706	29.95168	4.9046986
##	366	33.78648	62.80758	12.978046	2.0650022	7.806715	31.68231	5.2664658
##	515	27.82289	54.53383	9.805764	0.7673350	9.497076	26.65581	1.7268170
##	410	44.93850	80.69138	15.615596	2.1180670	11.376167	41.40582	8.8896211
##	426	21.73720	53.12596	9.035342	1.3126416	4.041232	20.31264	3.7607612
##	564	43.89404	77.83698	15.484341	2.2732733	12.131274	41.52209	5.7404547
##	174	63.28530	111.64909	25.154071	2.3725835	14.469830	61.80844	2.5940246
##	596	48.83914	93.88869	19.350459	3.0189602	12.544343	47.08012	7.2831804
##	391	55.55661	107.56491	17.761114	2.1784232	16.704209	56.66331	7.5494961
##	273	61.61534	128.83182	22.514773	1.7829545	11.860227	59.96818	6.3272727
##	206	41.00875	71.76432	16.299956	0.8111063	11.570179	39.69742	3.4110188
##	215	69.99549	121.82423	20.110423	1.2935211	18.683944	67.81070	6.4281690
##	412	48.47761	89.92119	16.038806	1.4758209	13.611940	46.17134	9.0758209
##	360	32.40174	67.58824	12.668845	0.6400871	9.857081	32.20261	2.6858388
##	345	55.48179	107.22562	22.573443	2.8824912	9.863102	53.23208	5.0963572
##	568	44.06000	79.62514	14.249714	1.4102857	13.335429	42.22229	5.6937143
##	603	59.06809	94.83161	18.264438	1.1604863	19.306991	56.16109	3.2571429
##	253	42.18959	80.03174	17.162928	1.4896318	9.403301	41.09945	3.4722810
##	349	41.21460	77.85263	15.924755	2.0173642	9.112199	39.38335	5.8864648
##	593	42.32904	75.98421	16.326963	2.0203573	11.895305	40.96676	3.6692979
##		CS	BB.bat	SO.bat	BA	OBP	SLG	OPS
##	617	0.8876755	10.394696	32.67707	0.2495766	0.3151221	0.4129279	0.7280654
##	173	1.3898405	33.124631	65.75192	0.2571626	0.3221331	0.4331278	0.7546676
##	240	2.1481317	28.436833	48.41370	0.2284898	0.3019024	0.3771091	0.6786881
##	168	1.7981928	23.037435	41.02108	0.2282293	0.2966329	0.3584931	0.6547850
##	36	2.4209091	18.466364	39.21000	0.2190847	0.2705444	0.3344229	0.6047829
##	234	3.0525384	33.559032	83.48701	0.2698735	0.3238866	0.4430047	0.7669826
##	129	1.1093064	30.593503	61.92493	0.2413735	0.3040982	0.3724786	0.6765288
##	29	2.4424968	31.642155	59.12099	0.2381813	0.3003135	0.3783103	0.6785227
##	657	0.7208247	28.514639	56.87093	0.2084976	0.2862984	0.3534205	0.6328144
##	166	1.0528479	42.674692	63.59483	0.2491365	0.3215767	0.4072562	0.7287111
##	472	1.7337313	27.835224	81.19881	0.2452179	0.3031335	0.4099961	0.7118214
##	407	1.9889220	23.736259	48.87942	0.2253389	0.2763781	0.3262327	0.6026308
##	46	2.8947066	38.781358	69.19448	0.2682262	0.3366838	0.4476069	0.7842124
##	528	1.4683053	28.153946	62.09659	0.2333183	0.2997026	0.3917521	0.6910300
##	124	3.9546758	36.163511	76.53127	0.2573860	0.3167684	0.4159185	0.7328752
##	592	1.7857143	22.784476	59.44220	0.2123357	0.2743874	0.3587532	0.6328437
##	586	0.7127211	26.474726	60.05223	0.2151640	0.2772229	0.3652460	0.6423050
##	601	1.3430267	34.118101	87.06350	0.2644653	0.3326675	0.4821145	0.8147626
##	612	2.8313180	34.440750	100.81741	0.2434275	0.3138262	0.4207605	0.7344140
##	61	3.9139252	33.849482	53.46462	0.2349601	0.2988861	0.3608619	0.6595241
##	216	1.5844636	39.211467	57.16276	0.2567910	0.3261214	0.3980572	0.7223318
##	462	1.3072626	20.015041	50.28878	0.1980563	0.2540384	0.2980630	0.5518764
##	583	2.3092968	40.721692	102.28010	0.2349234	0.3107057	0.3940388	0.7048162
##	346	2.4611734	23.050475	47.38913	0.2258710	0.2839670	0.3366237	0.6201516
##	458	1.8203769	29.329800	68.07362	0.2428946	0.3027075	0.3729055	0.6755065
##	630	0.4927536	13.178744	36.97585	0.2376795	0.3124106	0.4178647	0.7303092
##	510	2.0383531	32.792442	59.95149	0.2492356	0.3090086	0.3881062	0.6968550

##	613	1.1079442	31.972104	92.79200	0.2299953	0.2981810	0.4149472	0.7133176
##	635	0.8443709	12.281457	38.19205	0.2153675	0.2784735	0.3476623	0.6260497
##	429	1.4281450	19.971855	50.73049	0.2133091	0.2812145	0.3255375	0.6017388
##	339	2.0775128	27.600937	57.71976	0.2321203	0.3114438	0.3706171	0.6750621
##	354	2.2280928	28.689863	45.90936	0.2315035	0.2856966	0.3402726	0.6259472
##	400	2.6644417	37.755461	70.62136	0.2546220	0.3169997	0.3807919	0.6978511
##	141	1.3490991	38.238176	62.08446	0.2555039	0.3333492	0.4231219	0.7563309
##	567	2.4338189	25.921469	74.54718	0.2405911	0.2994537	0.3833846	0.6830437
##	91	0.8327904	51.213355	75.30402	0.2636640	0.3542528	0.4451503	0.7977218
##	251	2.8261596	26.664020	47.07940	0.2120685	0.2737935	0.3324763	0.6062470
##	171	2.9661118	45.719382	74.17717	0.2623575	0.3346213	0.3952353	0.7297086
##	347	2.2482993	47.735261	79.81859	0.2598452	0.3408620	0.4176856	0.7583276
##	319	1.9786416	21.975651	36.16617	0.2346776	0.3187726	0.3388257	0.6310604
##	372	2.2835113	24.274021	56.47924	0.2419360	0.3002070	0.3517883	0.6519364
##	320	1.8798665	49.623471	70.99611	0.2733295	0.3494103	0.4556769	0.8048468
##	428	1.9181287	32.984795	85.22105	0.2363292	0.3052756	0.3685040	0.6737235
##	566	1.8784177	40.368819	77.53287	0.2478253	0.3206113	0.4164750	0.7371476
##	359	2.9162494	27.090578	57.29358	0.2352223	0.2998133	0.3774279	0.6762336
##	547	1.2805629	21.458663	59.37599	0.2219534	0.2821716	0.3539051	0.6356149
##	159	1.7551020	32.091837	52.27381	0.2067607	0.2806315	0.3354833	0.6160444
##	77	3.6867969	34.165779	49.45885	0.2639000	0.3295564	0.4192498	0.7487284
##	108	4.3974359	33.526224	63.54371	0.2541093	0.3123730	0.4011958	0.7137751
##	624	0.7808896	15.278418	33.40527	0.2339325	0.3042224	0.3928550	0.6968287
##	76	2.9526786	31.972768	49.32768	0.2439049	0.3193296	0.3752812	0.6944017
##	653	1.5806258	33.681107	94.81468	0.2363359	0.3010108	0.3895620	0.6905464
##	117	3.1813659	32.701493	62.85029	0.2527148	0.3212706	0.3861790	0.7074189
##	207	1.3706140	22.725877	43.71360	0.2377300	0.2987422	0.3596573	0.6581359
##	460	1.4190816	23.963888	63.20776	0.2162114	0.2932385	0.3224192	0.5942954
##	442	1.4554411	17.414241	44.26691	0.2186776	0.2666796	0.3269067	0.5932842
##	370	1.7883180	23.052262	46.26658	0.2274195	0.3256772	0.3313860	0.6190854
##	152	2.2400975	26.700792	56.01219	0.2613679	0.3151153	0.3947412	0.7099265
##	257	2.5354142	35.223289	72.44538	0.2424882	0.3118862	0.3952411	0.7073126
##	484	1.3284921	18.603161	51.90389	0.2293040	0.2793150	0.3551448	0.6339679
##	574	1.3331314	43.021805	94.24712	0.2430917	0.3204590	0.4369560	0.7574861
##	554	3.3293627	39.580703	106.04169	0.2380731	0.3140757	0.4191987	0.7326712
##	392	1.4358154	25.826405	64.05482	0.2283946	0.2947849	0.3643999	0.6590093
##	192	1.6583333	36.493421	54.84123	0.2255039	0.2996921	0.3697660	0.6587757
##	265	2.2781065	36.492899	58.79467	0.2601336	0.3240863	0.3819358	0.7060341
##	275	1.4243306	29.445285	67.91269	0.2573436	0.3209477	0.4195563	0.7404732
##	286	2.0728127	38.692895	69.60834	0.2652927	0.3352785	0.4371705	0.7723320
##	134	1.4570565	32.055244	54.20760	0.2110062	0.2726662	0.3331312	0.6056725
##	69	3.6206897	30.439762	50.71860	0.2195392	0.2891242	0.3419460	0.6309690
##	155	1.8348315	36.168539	62.19607	0.2600586	0.3260826	0.4328111	0.7588617
##	7	3.7710843	30.769746	53.91209	0.2443629	0.3151438	0.3976539	0.7128415
##	436	1.4486486	34.839640	81.56156	0.2330768	0.3004203	0.3803261	0.6808907
##	389	1.8188235	23.777647	60.67882	0.2529189	0.3067766	0.4002723	0.7070882
##	490	2.5453785	25.014638	64.59013	0.2274135	0.2834606	0.3450142	0.6279410
##	673	1.1600512	24.690994	46.13359	0.2227784	0.2903131	0.3507810	0.6404533
##	88	3.1268403	37.480747	63.90713	0.2668324	0.3327994	0.4010430	0.7338614
##	287	3.0000000	23.702679	50.15547	0.2257170	0.2778197	0.3470007	0.6244202
##	414	2.1762153	25.774740	49.68142	0.2246802	0.2825133	0.3358582	0.6180097
##	219	1.8719694	28.690345	38.55721	0.2205213	0.2860159	0.3316861	0.6175372
##	21	2.8241320	48.200341	77.05862	0.2756332	0.3470213	0.4684670	0.8141653
##	471	1.6965217	21.455652	42.50870	0.2221379	0.2781573	0.3192134	0.5969036

##	513	2.9335649	28.327399	70.13374	0.2128216	0.2896875	0.3508783	0.6348628
##	232	1.4262931	30.201724	52.26767	0.2316219	0.2990236	0.3797497	0.6783854
##	250	2.3661076	37.943320	64.77270	0.2781268	0.3411537	0.4512341	0.7921976
##	292	1.9546790	31.441880	45.38061	0.2264195	0.2914072	0.3437532	0.6348216
##	659	0.9729616	24.673849	57.96324	0.1982278	0.2822368	0.3331009	0.6094490
##	164	1.4620985	20.278801	41.56831	0.2050417	0.2653120	0.3077822	0.5729075
##	521	1.5637669	29.055743	47.93201	0.2444340	0.3043793	0.3639836	0.6680638
##	244	1.1266319	23.490426	53.49260	0.2187416	0.2827251	0.3239218	0.6065809
##	584	2.0388406	30.462609	82.34551	0.2413758	0.3090658	0.4193556	0.7286164
##	79	1.6947460	31.567086	46.63917	0.2187100	0.2919583	0.3498778	0.6380041
##	122	2.0021580	28.339232	51.30255	0.2516968	0.3065654	0.4155698	0.7222050
##	652	1.3493924	25.422309	64.24089	0.2416077	0.3007765	0.3776645	0.6777290
##	4	3.2506394	22.098039	44.80989	0.2132824	0.2710437	0.3179958	0.5889752
##	660	0.9965055	32.529412	79.39546	0.2361688	0.3067378	0.4102969	0.7169369
##	644	0.5996671	22.218893	55.43903	0.2154193	0.2839447	0.3436347	0.6269495
##	433	2.2488202	24.747748	62.41656	0.2130886	0.2691242	0.3329146	0.6018039
##	618	0.5745394	13.122278	38.32496	0.2623541	0.3279989	0.4371126	0.7651882
##	600	1.3816856	31.816045	70.19408	0.2140219	0.2815290	0.3667129	0.6482110
##	305	2.1261023	27.044533	60.20855	0.2224197	0.2872647	0.3608725	0.6477020
##	236	1.9130435	27.642049	59.73734	0.2675962	0.3287218	0.4045681	0.7332228
##	448	3.1939338	21.021140	61.09972	0.2180112	0.2889225	0.3289899	0.6002806
##	540	1.3775763	31.648805	61.85820	0.2218916	0.3069036	0.3780787	0.6846845
##	20	2.8769634	37.164921	55.63351	0.2345468	0.3028298	0.3592101	0.6621121
##	325	1.3817228	19.293397	51.90118	0.2260035	0.2711069	0.3320850	0.6030002
##	100	2.1202559	31.630704	47.92537	0.2425544	0.3161613	0.3915336	0.6975810
##	111	2.2170062	27.423384	49.77458	0.2438426	0.3054504	0.3867241	0.6920796
##	637	0.6008837	13.237113	32.08100	0.2592401	0.3299853	0.4394786	0.7695420
##	323	1.3019734	20.274438	42.63561	0.2078823	0.2667101	0.3140289	0.5804662
##	591	1.9575866	23.355436	96.58005	0.2520836	0.3073463	0.3978506	0.7051906
##	223	1.1899752	40.630569	84.52847	0.2638821	0.3243130	0.4588438	0.7830527
##	60	2.8718549	37.170860	61.82972	0.2733481	0.3414775	0.4151736	0.7565159
##	507	1.9694297	35.308642	88.43915	0.2594882	0.3230917	0.4208522	0.7437973
##	394	1.6056671	38.203070	77.61098	0.2599817	0.3259139	0.4033595	0.7292373
##	5	3.5726594	37.476738	55.51522	0.2667826	0.3331548	0.4013179	0.7343431
##	537	2.8503280	36.669648	73.95110	0.2743020	0.3373634	0.4677466	0.8049468
##	59	4.0599268	38.678408	53.46066	0.2472820	0.3221429	0.3787230	0.7006317
##	514	1.7940280	32.077392	83.02072	0.2464212	0.3107940	0.4113817	0.7222493
##	397	1.6938951	19.869733	43.03568	0.2275052	0.2861678	0.3344210	0.6205100
##	260	2.3178340	37.433196	74.31313	0.2798354	0.3351615	0.4448633	0.7798881
##	201	1.7040069	27.286945	49.35416	0.2463484	0.3037979	0.3842183	0.6878103
##	276	1.5318544	37.381115	68.14278	0.2544475	0.3210044	0.4077377	0.7287128
##	664	0.8568385	27.859821	60.76055	0.2017644	0.2692364	0.3372175	0.6058957
##	619	0.7417910	17.079104	41.05970	0.2170026	0.3118677	0.3775901	0.6893717
##	534	2.3508311	33.690289	69.94619	0.2383281	0.2969193	0.4121044	0.7091166
##	417	1.4323843	42.139976	87.56465	0.2729092	0.3439709	0.4411034	0.7852356
##	262	2.9930475	28.772885	69.71495	0.2583646	0.3175814	0.3847803	0.7023220
##	598	0.5463002	30.257505	60.24736	0.2240559	0.2892826	0.4013224	0.6902880
##	255	1.9658220	53.898645	75.17384	0.2725706	0.3535582	0.4365107	0.7898962
##	71	2.8001136	41.117547	69.44179	0.2644253	0.3345048	0.4431673	0.7775779
##	191	1.6077844	45.276647	77.40539	0.2639734	0.3358700	0.4223199	0.7580334
##	182	1.6427955	28.899051	52.84987	0.2421590	0.3097423	0.3882486	0.6978668
##	39	2.2214101	28.257094	42.09974	0.2204885	0.2803535	0.3322697	0.6124534
##	597	1.3858945	36.779243	71.83945	0.2376706	0.3127159	0.4054741	0.7179529
##	647	1.4214582	36.983995	94.18909	0.2560503	0.3218476	0.4384195	0.7596749

##	383	3.3890244	37.484756	66.67866	0.2795444	0.3346662	0.4516469	0.7862485
##	504	2.4305127	32.142063	84.84558	0.2542296	0.3134281	0.4052145	0.7186121
##	183	3.1955373	35.425132	76.05755	0.2651944	0.3306964	0.4392235	0.7698791
##	89	2.2666388	32.345751	44.61699	0.2442553	0.3176285	0.3882370	0.7055812
##	473	1.6795943	30.428998	67.75119	0.2592055	0.3198716	0.4030226	0.7226372
##	90	2.9815029	42.484393	63.23064	0.2708968	0.3467688	0.4379878	0.7844609
##	424	2.0218805	30.259610	72.01419	0.2544370	0.3092715	0.3702696	0.6796617
##	252	1.3185802	26.910167	52.28791	0.2301244	0.2908983	0.3684772	0.6590561
##	496	2.5071798	32.284894	69.11143	0.2483417	0.3175787	0.3979725	0.7154908
##	463	1.3928417	21.954291	54.57870	0.2166341	0.2657157	0.3247924	0.5903147
##	535	1.8724775	28.174324	69.31773	0.2475436	0.3048333	0.3907621	0.6951429
##	199	2.2313797	33.661172	68.69048	0.2553583	0.3223801	0.3947349	0.7170655
##	87	2.3574262	30.599383	56.69326	0.2055768	0.2872936	0.3330465	0.6202929
##	197	2.6088983	29.421610	51.46695	0.2499062	0.3039944	0.3938156	0.6977828
##	291	2.8954248	37.427807	67.61141	0.2744731	0.3354314	0.4017434	0.7371625
##	432	1.3516725	19.311180	47.53829	0.2236836	0.2771164	0.3417242	0.6186296
##	336	1.5936814	22.930671	55.78061	0.2207451	0.2770849	0.3412163	0.6178787
##	651	0.9455206	25.314165	73.49758	0.2324462	0.2978479	0.3973086	0.6950125
##	157	1.8417667	31.662093	49.20197	0.2289725	0.2840553	0.3687243	0.6597770
##	331	1.6742712	30.002535	51.58344	0.2195342	0.2881065	0.3390928	0.6268548
##	571	1.5657841	24.946640	59.50305	0.2497969	0.3119149	0.4044301	0.7163731
##	74	3.6218996	38.684211	65.97883	0.2731702	0.3441738	0.4446863	0.7889987
##	640	0.6401799	15.223388	37.90255	0.2348966	0.3258891	0.4219265	0.7477046
##	524	2.3485030	27.555090	90.59641	0.2393925	0.3029278	0.4163886	0.7194171
##	72	2.4018692	31.800765	55.21538	0.2297657	0.2929431	0.3569537	0.6495523
##	447	2.3769725	27.364699	85.17417	0.2474220	0.3031111	0.3873211	0.6903799
##	670	2.9581422	38.041284	96.42718	0.2385996	0.3161570	0.4206663	0.7366762
##	64	2.9891757	39.551624	46.78226	0.2416593	0.3181930	0.3671727	0.6850193
##	363	1.3041061	22.507271	56.99658	0.2260585	0.2759072	0.3468048	0.6219867
##	399	2.0537589	23.486770	57.55691	0.2216925	0.2792036	0.3652176	0.6444163
##	115	4.0786182	39.827278	73.10185	0.2580080	0.3223855	0.4188757	0.7414405
##	650	0.9402555	26.158220	64.62464	0.2078646	0.2764933	0.3470280	0.6228715
##	493	2.8359462	31.955207	82.96529	0.2393913	0.3015728	0.3946118	0.6960125
##	66	2.2842335	50.883797	72.62630	0.2522901	0.3441490	0.4264675	0.7705641
##	421	1.4167393	19.726242	50.96295	0.2152868	0.2570070	0.3271963	0.5842464
##	148	2.0207399	35.466928	62.13509	0.2608217	0.3294688	0.4360739	0.7655596
##	559	0.9970606	22.422105	75.66079	0.2340106	0.2947769	0.3804692	0.6753097
##	385	2.1573472	23.364109	64.47378	0.2360073	0.2947149	0.3476369	0.6416930
##	302	1.4245283	36.849057	70.26474	0.2774612	0.3489437	0.4530737	0.8019911
##	437	1.2450303	27.621003	55.96889	0.2203633	0.2733006	0.3215143	0.5947453
##	452	2.7663331	29.317245	72.13891	0.2550610	0.3082335	0.3644399	0.6726974
##	290	2.2418478	30.859149	64.85734	0.2283528	0.2926643	0.3709977	0.6634313
##	226	1.5390417	26.640639	45.45342	0.2310639	0.3124795	0.3641106	0.6546020
##	621	0.5903614	16.376506	34.08133	0.2069858	0.3115695	0.3863235	0.6913874
##	53	2.8503799	42.576271	61.93220	0.2724869	0.3436155	0.4359359	0.7796193
##	154	1.1976021	23.123890	49.08925	0.2246765	0.2825548	0.3534300	0.6356641
##	667	0.5282575	24.656593	55.78532	0.2144137	0.2942197	0.3680364	0.6618434
##	301	3.6668598	43.073001	80.22885	0.2542395	0.3329467	0.4170335	0.7499876
##	497	1.4494834	39.545350	74.09472	0.2637225	0.3358967	0.4471307	0.7807488
##	309	1.7780172	29.196121	52.74181	0.2268045	0.2926366	0.3573869	0.6495859
##	585	1.6698505	31.170266	56.61586	0.2247856	0.2918317	0.3607715	0.6526669
##	409	1.9831152	27.757704	54.99705	0.2385703	0.2966563	0.3639164	0.6606143
##	373	1.6774606	24.801875	41.70984	0.2354514	0.3053178	0.3493902	0.6491984
##	67	1.9170689	34.519965	54.51821	0.2485859	0.3160257	0.3735362	0.6893725

## 614	1.6401399	31.239178	62.16266	0.2200656	0.2811287	0.3685537	0.6493977
## 322	1.6380995	35.583037	62.20826	0.2326348	0.3037829	0.3915292	0.6948404
## 636	0.9843750	14.835938	32.25000	0.2469803	0.3215131	0.4414081	0.7629475
## 202	2.3350694	29.092593	55.74942	0.2651791	0.3230481	0.4345469	0.7576600
## 582	3.2380117	28.781287	75.07953	0.2518665	0.3256426	0.3957407	0.7214852
## 405	2.3963887	21.447979	59.98624	0.2059826	0.2653902	0.3267236	0.5919506
## 218	1.4766108	23.495587	45.96734	0.2331974	0.2864047	0.3480330	0.6344155
## 68	2.4910394	29.560484	55.34946	0.2141498	0.2879808	0.3388915	0.6133932
## 303	1.7951736	33.480283	59.00765	0.2590965	0.3263933	0.3898775	0.7162419
## 310	2.9446081	34.992339	63.02298	0.2517906	0.3232538	0.4023625	0.7254123
## 544	0.9787505	21.003825	46.15980	0.2237968	0.2837384	0.3703201	0.6536163
## 238	1.8765432	25.850023	56.63877	0.2227726	0.2814355	0.3558482	0.6370547
## 615	0.4129353	12.334992	31.47595	0.2358607	0.3101360	0.3841559	0.6943814
## 181	1.3968322	29.704623	56.23031	0.2191849	0.2909938	0.3578445	0.6485332
## 562	3.0398810	29.958333	110.22619	0.2376166	0.2959924	0.3933556	0.6891147
## 341	1.9125754	18.949612	40.89793	0.2311395	0.2820474	0.3789835	0.6606648
## 446	1.7078118	20.165300	57.29003	0.2340440	0.2880142	0.3558546	0.6437177
## 137	2.4612722	23.030723	48.32453	0.2137145	0.2764220	0.3260369	0.6024736
## 374	3.7571014	47.885217	83.22261	0.2573871	0.3352842	0.4295828	0.7645988
## 672	1.3400693	33.646074	83.27483	0.2545763	0.3223446	0.4386094	0.7609953
## 23	2.2729869	30.537978	66.67219	0.2711677	0.3305388	0.4355145	0.7659878
## 213	2.9263158	32.243275	64.19766	0.2563152	0.3185506	0.3851657	0.7037453
## 443	1.8165014	27.263300	70.77863	0.2220417	0.2792932	0.3252735	0.6041455
## 381	2.0067539	26.474884	42.65597	0.2307321	0.2882605	0.3504644	0.6383385
## 212	1.8949523	29.636198	56.49523	0.2496718	0.3119269	0.3898675	0.7016543
## 494	2.0527649	25.074293	57.65302	0.2146126	0.2949919	0.3304523	0.6040378
## 542	2.1875000	27.104027	75.46770	0.2228193	0.3091168	0.3742491	0.6615622
## 280	2.7958357	41.910931	71.38924	0.2608643	0.3229665	0.4135369	0.7364919
## 431	2.0102740	38.234589	76.49600	0.2487391	0.3196884	0.4070503	0.7269393
## 18	2.3775330	21.262996	47.65551	0.2241712	0.2855283	0.3400128	0.6254596
## 312	3.0804994	35.789066	65.46879	0.2372399	0.3111356	0.3862239	0.6957127
## 278	1.2262483	28.578436	62.34512	0.2235049	0.2941370	0.3606165	0.6544223
## 556	1.1790718	25.512259	54.57224	0.2345201	0.3096519	0.3862161	0.6797781
## 180	3.4098074	33.443666	68.31115	0.2686592	0.3314900	0.4513571	0.7827180
## 209	2.5673790	26.462713	53.83428	0.2324250	0.2914354	0.3647559	0.6557992
## 19	3.0785160	31.110009	50.80155	0.2539825	0.3180048	0.3720191	0.6899988
## 177	2.8615836	40.040469	64.18768	0.2701928	0.3297198	0.4114549	0.7411645
## 150	1.6921732	23.711412	38.34368	0.2520401	0.3094839	0.3990079	0.7079407
## 476	2.0808696	26.938261	57.24913	0.2120853	0.2649646	0.3308579	0.5955306
## 109	2.8642922	35.358431	60.01262	0.2324780	0.2959750	0.3737718	0.6698040
## 470	2.4713376	25.487049	60.50276	0.2301766	0.2810544	0.3511796	0.6319786
## 627	0.7112561	18.238173	36.21860	0.2531569	0.3334739	0.4779977	0.8115103
## 93	2.1640212	30.301587	43.90520	0.2300778	0.2894100	0.3570408	0.6426727
## 445	1.4284010	31.861575	73.59069	0.2392156	0.3101662	0.3602330	0.6703366
## 84	2.5117904	33.540175	50.26594	0.2279761	0.2924929	0.3828227	0.6752750
## 456	1.9791667	32.486905	73.27024	0.2486555	0.3181741	0.3795478	0.6975551
## 382	4.2500000	41.567708	80.10012	0.2387152	0.3142526	0.3910984	0.7049088
## 50	2.3067599	32.121678	51.25315	0.2420649	0.3237288	0.3939317	0.6973313
## 416	2.2043400	33.128993	84.57866	0.2520705	0.3037459	0.4165866	0.7202974
## 92	1.6333930	27.052820	45.94584	0.2327411	0.3062767	0.3722026	0.6776396
## 641	0.9633943	10.545757	31.69717	0.2132180	0.2802379	0.3590882	0.6394859
## 530	0.8295912	27.451929	96.28843	0.2552595	0.3073142	0.4204109	0.7277409
## 247	2.6531690	31.069836	69.46479	0.2654981	0.3202843	0.4137556	0.7338607
## 196	2.8820483	31.665708	64.05524	0.2619919	0.3248330	0.3845996	0.7093069

##	314	2.7197068	25.351013	48.33635	0.2240810	0.2832936	0.3445481	0.6275085
##	665	1.0407643	21.722293	46.59618	0.1950862	0.2569386	0.2997837	0.5561611
##	594	1.0399508	22.355870	85.89736	0.2363702	0.2893703	0.3828758	0.6722211
##	379	1.7515951	17.322416	41.10336	0.2091806	0.3026463	0.3155911	0.5928391
##	272	1.4496388	26.487463	38.41691	0.2197204	0.2761117	0.3309722	0.6069245
##	96	3.6507042	56.065915	72.60113	0.2676749	0.3550719	0.4337949	0.7887421
##	351	2.2601975	25.757836	50.82138	0.2172678	0.2808536	0.3272844	0.6076802
##	98	2.5643508	36.415718	52.40205	0.2778176	0.3451000	0.4331332	0.7781806
##	264	1.7808279	26.977342	56.82789	0.2565317	0.3154363	0.4155374	0.7304954
##	506	2.0490956	24.903962	58.30276	0.2378699	0.2930497	0.3858187	0.6786097
##	47	1.9593886	34.552838	53.04105	0.2577543	0.3275566	0.4065016	0.7339724
##	172	1.6283898	32.010593	45.05847	0.2838217	0.3470331	0.4523232	0.7926623
##	411	3.7553699	39.082936	84.71241	0.2694726	0.3291059	0.4376495	0.7667255
##	151	1.3045903	32.222222	49.43544	0.2442147	0.3015655	0.3990022	0.7001362
##	103	2.1612522	34.065564	70.72475	0.2612716	0.3263664	0.4282468	0.7546049
##	378	2.0942341	20.090792	49.02410	0.2217511	0.2860276	0.3252795	0.6101046
##	268	1.3905397	42.060643	66.78290	0.2520541	0.3328838	0.3996610	0.7320671
##	11	3.5185349	26.032657	51.17652	0.2444770	0.2992182	0.3640288	0.6630539
##	45	2.6293403	35.775608	47.73785	0.2451465	0.3179953	0.3698087	0.6774058
##	365	2.8472461	28.375645	60.25387	0.2455573	0.3069335	0.3779286	0.6840886
##	139	2.0135766	26.274077	50.29911	0.2310166	0.2915999	0.3482388	0.6399212
##	575	1.3907168	43.145123	102.96827	0.2486608	0.3203360	0.4305115	0.7508811
##	671	1.9060773	27.806630	84.52118	0.2275253	0.2885124	0.3686070	0.6572859
##	604	1.7080636	42.894055	92.36904	0.2440321	0.3197922	0.4366439	0.7562926
##	187	2.3631885	29.300045	63.55934	0.2218451	0.2849123	0.3408553	0.6255481
##	16	1.8360390	35.211580	61.30249	0.2596951	0.3374451	0.4164115	0.7540037
##	565	1.9951981	27.126651	85.05822	0.2362861	0.2926450	0.3690053	0.6617171
##	607	1.7718855	25.303872	73.72054	0.2065139	0.2661755	0.3427589	0.6087317
##	413	1.9154380	23.696878	63.76062	0.2340172	0.3118428	0.3713792	0.6616966
##	185	2.4684243	24.198038	53.11220	0.2522332	0.3146687	0.3862091	0.7008480
##	477	2.1172788	18.088481	54.31427	0.2283214	0.2750804	0.3636262	0.6380420
##	500	1.5306644	23.705707	50.38288	0.2182016	0.2739192	0.3299087	0.6034131
##	145	1.1015206	34.885957	48.49642	0.2677822	0.3263538	0.4061777	0.7324313
##	337	5.8504785	33.573565	62.84629	0.2633528	0.3274433	0.4164148	0.7439242
##	51	3.7535606	33.533880	47.39793	0.2334919	0.3104921	0.3709041	0.6810870
##	406	2.3346040	26.250741	54.49894	0.2130342	0.2732651	0.3240484	0.5974259
##	377	2.4047914	21.809583	50.21148	0.2148793	0.2942501	0.3193240	0.5885155
##	116	2.5150088	47.676280	69.52266	0.2572642	0.3379477	0.4280062	0.7657272
##	113	5.0708755	34.804050	74.26027	0.2693096	0.3332152	0.4264181	0.7595375
##	311	1.6840491	21.113497	41.48466	0.2076492	0.2755322	0.3288198	0.6042070
##	25	2.1915780	26.900972	61.89912	0.2327456	0.3026246	0.4002911	0.6907077
##	2	2.0005718	40.386507	62.10806	0.2624635	0.3374564	0.4179796	0.7533761
##	266	2.4386344	27.563959	43.00303	0.2422341	0.3049649	0.3728738	0.6774208
##	560	2.0193776	40.463887	86.25543	0.2610885	0.3297997	0.4387861	0.7686212
##	393	1.7399084	18.847690	48.62172	0.2255203	0.2759360	0.3510647	0.6269860
##	454	1.2982842	28.204136	71.12582	0.2238760	0.2783143	0.3311250	0.6091164
##	631	0.7554180	15.125387	34.62074	0.2678306	0.3393224	0.4457396	0.7852553
##	355	3.4533107	46.425014	87.29315	0.2414547	0.3260333	0.3921314	0.7181375
##	221	3.0665881	33.584561	63.74249	0.2464746	0.3083407	0.3752225	0.6836873
##	576	1.2927131	30.873199	69.20008	0.1977926	0.2734083	0.3280126	0.6013570
##	395	2.0380117	18.012531	47.70468	0.2031957	0.2585787	0.3142289	0.5726531
##	633	0.2467949	18.266026	38.64904	0.2178638	0.3097404	0.3764631	0.6862196
##	249	1.8243327	37.828678	73.58101	0.2714517	0.3327417	0.4327799	0.7649191
##	277	1.2226688	26.778135	52.50804	0.2041235	0.2785913	0.3078128	0.5860001

##	529	1.7549272	23.124250	51.35604	0.2238480	0.2791911	0.3501270	0.6289523
##	459	1.1741542	37.691070	67.02052	0.2389897	0.3123106	0.3665005	0.6788326
##	662	1.1551326	38.840830	87.27682	0.2315256	0.3163518	0.3930235	0.7091087
##	451	2.4579606	31.515206	89.42457	0.2360798	0.3030534	0.3735304	0.6764290
##	348	2.7963721	34.651258	62.98186	0.2514179	0.3175297	0.3721992	0.6896592
##	526	1.5345912	46.719840	94.49914	0.2389259	0.3180121	0.4064079	0.7241349
##	638	1.0519263	14.634841	35.91625	0.2213276	0.3029502	0.3595357	0.6627201
##	35	3.4608241	31.796866	59.40511	0.2551458	0.3147471	0.3847444	0.6996521
##	489	1.5059185	17.028496	55.57168	0.2251495	0.2730255	0.3401136	0.6125259
##	654	1.0088652	40.471631	79.48995	0.2598372	0.3309119	0.4325006	0.7633766
##	229	1.2937853	46.777966	65.03333	0.2610003	0.3410148	0.4178770	0.7587193
##	646	1.5548349	28.710495	88.60849	0.2327023	0.2981703	0.3865403	0.6847358
##	317	1.8533917	31.765864	57.02713	0.2185896	0.2901292	0.3457082	0.6356502
##	425	1.2982992	22.287396	48.99128	0.2120103	0.2816770	0.3150563	0.5786831
##	488	2.0390356	31.294489	74.19805	0.2429061	0.3062401	0.3825105	0.6886339
##	99	2.5314642	40.434268	74.67975	0.2694093	0.3357632	0.4560274	0.7896974
##	205	4.7351351	33.675075	75.05225	0.2607999	0.3191451	0.4179867	0.7369636
##	533	1.9830611	23.219601	87.66727	0.2511464	0.3094472	0.4068846	0.7162944
##	81	1.9078381	27.646425	44.46167	0.2514153	0.3283762	0.4352837	0.7649940
##	1	3.1812312	33.241498	59.99699	0.2333083	0.3021459	0.3644542	0.6664730
##	367	1.3287749	37.570940	75.80456	0.2723944	0.3328139	0.4256645	0.7583625
##	283	2.4373536	41.761710	75.13583	0.2579736	0.3244150	0.4391664	0.7636219
##	13	3.7202312	34.807514	72.05318	0.2658128	0.3258342	0.4017189	0.7273195
##	208	1.9825511	25.252106	68.11552	0.2658860	0.3156898	0.4166170	0.7324139
##	527	2.0909091	29.573698	62.48058	0.2333640	0.2922618	0.3821471	0.6737686
##	161	1.9341582	20.099867	43.58551	0.2104887	0.2639115	0.3215401	0.5809052
##	475	2.7452229	28.662420	84.23798	0.2439194	0.3005811	0.3696373	0.6706553
##	512	1.2268595	23.687603	55.90124	0.2301296	0.2794493	0.3378558	0.6169714
##	9	4.0372220	35.852020	50.48025	0.2194914	0.2878454	0.3380957	0.6258694
##	420	2.1201602	35.271473	68.03605	0.2354114	0.2989242	0.3495223	0.6482281
##	289	2.3430874	25.488550	45.35115	0.2241329	0.3109269	0.3299917	0.6240710
##	195	1.1152872	36.922720	38.99240	0.2499299	0.3246211	0.3903224	0.7148220
##	269	1.0387789	34.238449	59.67822	0.2299785	0.3014170	0.3706703	0.6717524
##	335	0.9863170	35.945838	65.66876	0.2607597	0.3316022	0.4388147	0.7705139
##	17	2.9077605	26.290022	46.48780	0.2244392	0.2842656	0.3313646	0.6154755
##	297	0.6756055	22.471886	51.09602	0.2118744	0.2729003	0.3251304	0.5976284
##	666	2.1637403	31.130666	63.89914	0.2069289	0.2753329	0.3339325	0.6086480
##	623	0.4530478	9.456343	35.05272	0.2373278	0.2970379	0.3811598	0.6782570
##	190	2.4962143	51.997670	73.06348	0.2588972	0.3389866	0.4428580	0.7818429
##	295	1.4497265	33.878418	59.95036	0.2315826	0.2963049	0.3853827	0.6814351
##	222	1.9285092	28.549259	44.16478	0.2385016	0.3101358	0.3687845	0.6787343
##	501	0.8239105	34.818610	100.56419	0.2492942	0.3118718	0.4257297	0.7376866
##	464	2.3917346	24.724680	69.83935	0.2400306	0.2950809	0.3681062	0.6632106
##	140	2.9457688	51.419547	89.54768	0.2611630	0.3379948	0.4311097	0.7691769
##	176	1.6361675	31.895123	54.43548	0.2351355	0.2986330	0.3747381	0.6732014
##	558	2.1155822	27.936216	60.85360	0.2241295	0.2878403	0.3628069	0.6505611
##	546	1.0819193	34.409011	86.43417	0.2425728	0.3148548	0.4264307	0.7413468
##	102	3.8560194	32.554749	58.88687	0.2452331	0.3145623	0.3742351	0.6887925
##	12	3.8304158	31.670131	58.65208	0.2545335	0.3207455	0.3913392	0.7086993
##	430	1.8729412	27.501176	64.12176	0.2376123	0.3003924	0.3666030	0.6668821
##	350	1.8153645	21.475775	50.99913	0.2327673	0.2942592	0.3410341	0.6294575
##	516	1.6723230	32.468695	76.47221	0.2475050	0.3088688	0.3958775	0.7046520
##	14	3.5206009	28.451931	46.63863	0.2453164	0.3079948	0.3629440	0.6706859
##	577	2.0541500	23.691079	54.02796	0.2156867	0.2698853	0.3433167	0.6132760

##	403	2.0054282	32.288902	76.49397	0.2348517	0.3068563	0.3978225	0.7046469
##	10	4.0111669	34.876047	57.06533	0.2597990	0.3280507	0.3990769	0.7270359
##	531	1.9314185	40.066823	77.99179	0.2533681	0.3242627	0.3953524	0.7196915
##	342	2.8506173	29.007407	51.58025	0.2700210	0.3266880	0.3942822	0.7210127
##	465	1.5078671	25.956731	54.65559	0.2322107	0.2916395	0.3278418	0.6191456
##	210	2.0710059	26.741420	63.27278	0.2587297	0.3151465	0.3887039	0.7039288
##	132	2.4158206	24.706430	43.97885	0.2470893	0.3009833	0.3719189	0.6727838
##	390	2.3064307	20.276219	51.12128	0.2100374	0.2636414	0.3246081	0.5881893
##	228	2.0989982	34.454331	61.58279	0.2723483	0.3340011	0.4138444	0.7479647
##	271	1.0431965	26.927862	57.40950	0.2278749	0.2889346	0.3569297	0.6454711
##	520	2.1570997	20.077255	60.54381	0.2077589	0.2673704	0.3390018	0.6060746
##	304	1.7874947	19.173638	38.95649	0.2049940	0.2732834	0.3044076	0.5738761
##	133	2.1983627	20.709698	54.84068	0.2455683	0.2971037	0.3759428	0.6730374
##	28	2.8291032	35.899041	68.65651	0.2731903	0.3438669	0.4481208	0.7898174
##	561	2.0942088	30.562398	67.98858	0.2282193	0.2967679	0.3419252	0.6388278
##	200	1.4355045	32.658152	55.46403	0.2281646	0.2936749	0.3626785	0.6561619
##	144	2.0653567	25.797522	44.34771	0.2213757	0.2809187	0.3312501	0.6120420
##	274	1.5208160	23.586595	35.60408	0.2436721	0.2991389	0.3495841	0.6485397
##	376	1.2267947	27.814815	47.85002	0.2307629	0.2929017	0.3515905	0.6436846
##	293	3.0653179	37.644509	66.55145	0.2649240	0.3338366	0.4178083	0.7517118
##	225	2.0430108	23.764301	47.65333	0.2292823	0.2860071	0.3366769	0.6226761
##	444	1.2621015	28.303424	87.64581	0.2497546	0.3040721	0.4102428	0.7146102
##	332	2.3822875	32.374277	79.18647	0.2179169	0.2808841	0.3521132	0.6326898
##	149	1.2189206	36.906004	73.86113	0.2552159	0.3188849	0.4169555	0.7354522
##	628	0.6915739	11.923688	30.95390	0.2393132	0.3123434	0.3752130	0.6875946
##	263	2.8378039	25.491618	36.27997	0.2359359	0.2935101	0.3511375	0.6445087
##	384	2.8760529	34.435620	67.30445	0.2440084	0.3088645	0.4041629	0.7130933
##	388	1.9006623	31.408790	85.59241	0.2411578	0.3053594	0.4054032	0.7106907
##	356	3.5035129	32.603044	60.63525	0.2696875	0.3313820	0.4046920	0.7359630
##	358	2.0926316	26.250105	59.08547	0.2355853	0.2927379	0.3490995	0.6416240
##	130	2.0464135	38.902351	63.16998	0.2630865	0.3299041	0.4379792	0.7680144
##	629	0.8396369	14.540091	38.00000	0.2223519	0.3110155	0.3845262	0.6956005
##	481	2.1398793	29.476687	72.65661	0.2342117	0.2938659	0.3713160	0.6652477
##	83	2.4485459	35.720917	63.28300	0.2724723	0.3393316	0.4319188	0.7712979
##	112	1.6054569	22.979212	64.14032	0.2031782	0.2673383	0.3359127	0.6032629
##	386	2.4538391	27.406307	59.23218	0.2582274	0.3172086	0.3860569	0.7033167
##	455	2.5238303	23.248798	59.97989	0.2182443	0.2795061	0.3406580	0.6197352
##	211	1.5521683	21.812366	42.93602	0.2040685	0.2628001	0.3171408	0.5797886
##	75	2.2469360	27.031775	41.81389	0.2537420	0.3191112	0.3898967	0.7087860
##	97	2.9651675	33.824956	60.00397	0.2510090	0.3213470	0.4126740	0.7338674
##	8	5.4153318	42.399886	81.41648	0.2538096	0.3273571	0.4063551	0.7337804
##	609	2.5949143	34.104080	86.55293	0.2324374	0.3111554	0.4132566	0.7234480
##	491	1.3261146	21.023355	60.66454	0.2217742	0.2741644	0.3468783	0.6205065
##	136	2.2115215	24.148637	46.58575	0.2446477	0.3133185	0.3656905	0.6616464
##	328	4.5502615	48.231261	89.19582	0.2574233	0.3366265	0.4297427	0.7662631
##	241	2.4031816	44.204059	65.66758	0.2730221	0.3477632	0.4438257	0.7917014
##	423	3.4322733	25.136631	85.30801	0.2336325	0.2919126	0.3669524	0.6587760
##	55	3.9120235	36.317302	54.99589	0.2714665	0.3320966	0.4192899	0.7489982
##	581	1.5292904	26.733498	62.83870	0.2124628	0.2819066	0.3471459	0.6290468
##	398	1.8711409	20.727069	45.06398	0.2028821	0.2561183	0.3144571	0.5704854
##	121	3.3265766	45.199324	71.89020	0.2797411	0.3504970	0.4302572	0.7806886
##	580	2.8644068	29.710111	84.01403	0.2493215	0.3098953	0.3962483	0.7060046
##	434	1.5254310	21.215948	56.60733	0.2151880	0.2698725	0.3270154	0.5966429
##	483	2.6030973	17.917257	50.11681	0.2596051	0.3060695	0.3646917	0.6702174

##	56	3.2049608	33.753699	58.81549	0.2333215	0.2932033	0.3813832	0.6743950
##	306	1.1839031	26.883600	42.42709	0.2162087	0.2900575	0.3279391	0.6176732
##	160	3.0493754	33.929804	63.48899	0.2700498	0.3309128	0.4171614	0.7480016
##	569	1.2452607	30.889415	66.27528	0.2127148	0.2815689	0.3637462	0.6452600
##	655	2.3798359	32.077374	89.59379	0.2446533	0.3039108	0.3859047	0.6868721
##	189	1.0249788	22.321761	46.45089	0.2290268	0.2875174	0.3568692	0.6441740
##	261	1.5731707	26.730866	46.71068	0.2332720	0.2977391	0.3586095	0.6560031
##	52	2.7588933	43.209486	58.36081	0.2709739	0.3464070	0.4287735	0.7750371
##	329	2.7035176	33.935302	86.06407	0.2564714	0.3156216	0.4354680	0.7509194
##	658	1.1053512	16.178930	50.94774	0.1964949	0.2518898	0.3060048	0.5573874
##	326	2.1828358	25.631219	62.43159	0.2517450	0.3081103	0.3932818	0.7014005
##	227	1.8985507	27.784679	57.38882	0.2313402	0.2860149	0.3819853	0.6677888
##	509	2.0429522	27.761645	86.46763	0.2543737	0.3046473	0.3883723	0.6929027
##	318	2.4263158	41.826901	71.05906	0.2685183	0.3387970	0.4136393	0.7516131
##	352	1.4343175	24.116389	47.09628	0.2253340	0.2780230	0.3456474	0.6233405
##	579	1.5789696	20.008446	56.76816	0.2125983	0.2654032	0.3249213	0.5903361
##	230	2.5812579	18.525116	38.82018	0.2806817	0.3205689	0.4076309	0.7280636
##	246	1.4113043	26.327391	38.78739	0.2386259	0.2962211	0.3847799	0.6788502
##	563	1.7741117	28.480541	61.50423	0.2036083	0.2664892	0.3275836	0.5941443
##	31	1.9880689	28.822802	49.22095	0.2283425	0.2912975	0.3400430	0.6312778
##	126	2.0655594	30.951923	51.45760	0.2148200	0.2838424	0.3340400	0.6177514
##	313	2.2487367	37.506457	75.19315	0.2564081	0.3254439	0.4112730	0.7365962
##	242	1.5325553	49.074324	69.98956	0.2530128	0.3331332	0.4031307	0.7362630
##	120	2.1046061	32.214808	47.78132	0.2350518	0.2952185	0.3921268	0.6873404
##	101	2.2020997	24.465442	46.49913	0.2236462	0.2822173	0.3457728	0.6278726
##	616	0.2577488	19.605220	42.65905	0.2628251	0.3390393	0.4689338	0.8080105
##	419	2.5678867	29.076151	78.25915	0.2422674	0.2957071	0.3681994	0.6640740
##	557	1.1517707	27.024452	63.36551	0.1981745	0.2709772	0.3300768	0.6009364
##	78	1.7918033	35.884699	57.47377	0.2583940	0.3291793	0.4062032	0.7353470
##	217	1.7027629	35.849376	54.02941	0.2437299	0.3101479	0.3648572	0.6749308
##	43	2.7698668	19.758842	50.07855	0.2202761	0.2720161	0.3198309	0.5918263
##	632	0.4713178	17.181395	31.24031	0.2386924	0.3338639	0.4242974	0.7583456
##	284	2.1988950	25.028049	47.11730	0.2059742	0.2658417	0.3326416	0.5983436
##	552	1.4555789	28.861474	58.93305	0.2214312	0.2972671	0.3586620	0.6554905
##	570	1.4195570	21.154200	59.17092	0.2087182	0.2697009	0.3098595	0.5794992
##	194	1.1913310	30.735989	42.35989	0.2320111	0.2917727	0.3472572	0.6388797
##	661	1.2058824	22.934454	57.87605	0.2100302	0.2797386	0.3380943	0.6136179
##	453	2.8959140	25.698495	58.55355	0.2209682	0.2821134	0.3341765	0.6161465
##	294	1.3872664	38.883762	75.80374	0.2418540	0.3156416	0.3666028	0.6819965
##	156	1.1844492	19.942549	45.94730	0.2216195	0.2809519	0.3433575	0.6237892
##	362	3.2137809	42.697291	74.00707	0.2737516	0.3428816	0.4477469	0.7874424
##	285	1.6713533	27.196837	53.05009	0.2182001	0.2973048	0.3400039	0.6161916
##	578	2.0273621	21.960667	66.34587	0.1961422	0.2516767	0.3105211	0.5622187
##	220	1.7671821	21.448024	39.16838	0.2269735	0.2882692	0.3370070	0.6251406
##	142	2.5094255	35.697487	57.32765	0.2296430	0.3195310	0.3653080	0.6848492
##	15	3.7510276	44.092190	59.25191	0.2817682	0.3559690	0.4240691	0.7797182
##	608	1.1992620	20.816728	53.30832	0.2280453	0.2841471	0.3570922	0.6409696
##	300	1.5720950	30.357930	43.72477	0.2390289	0.3012236	0.3628078	0.6636080
##	163	3.0648308	33.057372	66.65290	0.2735447	0.3366764	0.4270486	0.7636930
##	548	1.7676117	26.202320	53.63789	0.2174789	0.2902450	0.3401244	0.6274711
##	634	0.6882911	17.174051	33.70570	0.2536360	0.3351687	0.4275332	0.7627457
##	555	1.6231555	37.200341	85.10216	0.2363603	0.3057398	0.3987787	0.7044614
##	511	1.1516142	26.285247	60.13649	0.2151100	0.2747831	0.3439630	0.6184287
##	368	1.2658174	16.709130	41.93163	0.2363254	0.3080605	0.3472351	0.6333004

##	70	3.0562637	36.108571	51.00879	0.2708549	0.3452590	0.4182553	0.7633507
##	239	2.9916567	35.236591	59.38319	0.2797452	0.3389641	0.4125743	0.7515331
##	123	1.9847597	35.500000	61.47069	0.2686642	0.3352361	0.4540175	0.7893163
##	333	1.3814564	29.761643	49.66215	0.2208201	0.2913543	0.3461170	0.6366300
##	138	4.5720903	33.137232	74.78691	0.2685718	0.3288819	0.4296156	0.7586307
##	224	2.7687828	35.569016	69.73791	0.2620735	0.3284222	0.4007913	0.7292241
##	193	2.3492615	21.370982	51.62163	0.2484243	0.3056480	0.3961214	0.7016011
##	645	0.9914894	24.737447	60.01404	0.2063400	0.2742411	0.3551226	0.6287587
##	649	1.2082833	34.528812	78.83794	0.2486427	0.3283317	0.4117826	0.7398564
##	656	1.8321799	27.544983	76.56747	0.2364113	0.2984828	0.3923935	0.6908915
##	135	4.3809524	35.491476	59.38977	0.2508448	0.3182359	0.3870372	0.7053545
##	498	1.2438803	28.563463	67.25159	0.2321880	0.2930117	0.3643476	0.6567830
##	387	2.0534111	32.211400	64.86804	0.2215906	0.2888549	0.3404277	0.6291100
##	439	3.3323649	32.217897	70.81058	0.2576798	0.3188541	0.4067786	0.7256324
##	330	1.6251526	40.539072	70.71856	0.2616181	0.3268645	0.4310770	0.7579894
##	599	1.2216102	17.369068	58.33390	0.1984730	0.2488573	0.3074950	0.5561816
##	467	4.4963942	26.037260	66.74639	0.2511173	0.3088045	0.3674155	0.6760896
##	538	2.1934911	29.993491	85.56450	0.2505686	0.3037044	0.4030875	0.7066246
##	587	1.6174355	33.067711	67.99111	0.2193037	0.2843362	0.3752755	0.6593975
##	175	1.2673442	18.104286	34.96553	0.2225851	0.2743315	0.3432196	0.6173837
##	589	2.2717201	44.419242	95.58892	0.2590493	0.3265884	0.4439142	0.7704666
##	622	0.7308294	11.909233	37.71362	0.2512817	0.3046385	0.3947152	0.6996354
##	518	2.4387711	20.760277	63.37170	0.2162197	0.2841336	0.3428983	0.6133181
##	203	0.7010716	47.395375	70.64523	0.2745901	0.3496892	0.4429809	0.7928026
##	179	1.6564987	26.796640	53.49823	0.2207747	0.2698610	0.3694500	0.6392386
##	422	1.3167053	39.540023	74.53654	0.2755643	0.3388892	0.4198736	0.7588304
##	214	2.5655362	25.773602	51.22502	0.2431467	0.3020815	0.3847197	0.6868686
##	605	0.9484493	29.089271	65.30008	0.2090448	0.2719492	0.3549451	0.6265899
##	178	2.0162075	43.933549	75.41545	0.2745023	0.3478430	0.4556212	0.8032564
##	344	1.4932856	31.684423	64.74530	0.2254920	0.2852774	0.3527822	0.6377148
##	461	2.3762334	27.097812	57.77563	0.2424565	0.3001613	0.3571947	0.6573066
##	440	2.3850205	32.658865	68.79403	0.2472972	0.3111807	0.4000907	0.7112148
##	449	2.6184602	17.902595	54.90557	0.2311015	0.2752220	0.3661868	0.6411854
##	606	1.4118383	19.390163	49.76782	0.2511701	0.3013134	0.3761393	0.6773253
##	418	1.6831858	21.006637	52.26416	0.2215198	0.2799624	0.3569041	0.6363673
##	550	1.5730193	21.487794	45.84882	0.2162969	0.2688948	0.3287263	0.5972745
##	62	1.7399314	33.309769	49.10154	0.2277076	0.3008317	0.3509330	0.6515928
##	371	1.8172566	27.294690	54.96947	0.2446251	0.3012283	0.3803241	0.6808660
##	106	2.0245555	19.003810	44.32938	0.2262101	0.2764876	0.3715662	0.6479914
##	184	1.6932489	32.266245	48.97511	0.2344511	0.2978478	0.3671292	0.6650704
##	188	3.1409817	31.273402	61.00913	0.2605646	0.3255966	0.4218547	0.7474130
##	321	3.0017710	32.171192	61.81700	0.2586204	0.3244911	0.3917492	0.7161253
##	539	2.5847311	33.622903	73.50434	0.2371532	0.3070797	0.3855814	0.6927033
##	186	2.2371134	26.809278	47.96735	0.2212429	0.2814482	0.3563113	0.6375909
##	307	2.6388060	35.373731	68.16239	0.2641951	0.3280302	0.4060037	0.7340859
##	590	1.1884422	28.381910	64.66499	0.2158318	0.2942241	0.3725503	0.6665226
##	485	2.3958333	31.615476	84.50179	0.2436775	0.3003571	0.3890779	0.6894295
##	573	1.9978214	25.690632	57.62527	0.2080593	0.2800505	0.3301673	0.6101043
##	254	2.9203693	38.012118	63.95211	0.2667580	0.3251618	0.4044955	0.7295149
##	34	3.2507003	38.152661	59.70915	0.2668322	0.3296746	0.3958071	0.7253623
##	131	2.8309738	29.694123	54.82540	0.2190246	0.2796311	0.3406817	0.6203640
##	536	2.1918129	30.717544	78.77953	0.2552052	0.3200100	0.4146289	0.7347644
##	487	1.6601671	39.664624	83.32813	0.2504809	0.3183323	0.4187293	0.7369955
##	338	2.5136869	28.029512	59.39991	0.2342907	0.2895754	0.3703988	0.6596266

##	94	2.7189374	27.632391	48.51371	0.2269890	0.2928494	0.3539966	0.6464708
##	343	2.6401051	25.384851	54.11515	0.2279023	0.3247558	0.3312300	0.6353316
##	204	2.1662971	22.411973	44.61907	0.2432547	0.2920524	0.3789427	0.6706707
##	104	1.7877358	26.518010	43.05703	0.2262114	0.2929807	0.3578321	0.6506424
##	107	2.5995754	23.923567	38.47431	0.2486045	0.3000196	0.4089942	0.7087713
##	457	1.7007979	25.587766	56.89761	0.2301686	0.2897362	0.3318213	0.6213760
##	366	1.8988377	26.159277	47.92294	0.2327452	0.2916503	0.3710337	0.6621960
##	515	0.7080201	20.980368	48.32289	0.2130814	0.2746013	0.3540320	0.6282447
##	410	2.7171884	37.498627	82.28391	0.2321357	0.3072123	0.3761467	0.6831731
##	426	1.6320797	18.556411	46.71998	0.2194164	0.2753860	0.3122374	0.5873291
##	564	1.9639640	27.133419	68.60317	0.2331743	0.2942108	0.3809826	0.6751040
##	174	1.6397188	39.190393	73.78500	0.2787424	0.3468278	0.4522201	0.7988189
##	596	2.5993884	31.154128	88.35107	0.2402651	0.3032277	0.3885736	0.6915917
##	391	3.0580913	33.564315	85.51037	0.2494434	0.3119886	0.4077407	0.7197709
##	273	2.1653409	30.506250	64.84545	0.2865561	0.3347225	0.4265215	0.7611604
##	206	1.1609095	31.163096	58.50197	0.2271698	0.2916112	0.3805996	0.6722768
##	215	2.0935211	51.189859	74.05465	0.2674921	0.3426157	0.4333327	0.7758806
##	412	2.8674627	33.170149	80.34746	0.2420275	0.3034106	0.3986087	0.7020911
##	360	1.7782135	25.220044	58.96209	0.2280255	0.2888993	0.3565132	0.6443105
##	345	1.9324324	38.843126	63.40423	0.2654454	0.3321263	0.4126561	0.7447843
##	568	1.2720000	32.892571	72.01543	0.2340857	0.3026912	0.4025321	0.7052966
##	603	1.3398176	34.392097	84.19574	0.2638277	0.3338215	0.4819148	0.8157353
##	253	1.5289886	27.768515	54.97545	0.2357915	0.2961635	0.3628079	0.6586468
##	349	1.1509350	30.478629	52.03250	0.2284177	0.2891555	0.3615206	0.6506265
##	593	1.7087661	23.948068	66.85750	0.2267342	0.2895245	0.3787319	0.6678708
##		OPSpplus	TB	GDP	HBP.bat	SH	SF	IBB.bat
##	617	96.13304	58.04680	2.232449	1.6333853	1.05460218	0.6396256	0.29017161
##	173	89.13102	175.78441	7.929711	4.8298878	0.99645600	2.7879504	2.57176610
##	240	74.65543	132.63657	5.479982	2.6997331	2.18816726	2.5769573	3.44795374
##	168	68.92038	105.86446	5.027108	4.3709122	2.16092943	1.7134251	1.98321859
##	36	61.69276	88.13909	3.620000	1.4540909	2.20272727	1.8240909	1.22636364
##	234	96.30832	189.74911	9.020661	3.2432113	2.48229044	2.8884298	2.13990555
##	129	78.96991	120.52897	5.849868	2.1334504	2.08033363	1.8625988	2.84240562
##	29	75.54051	128.14280	6.444207	1.8879863	1.63103891	1.8648995	2.96879008
##	657	67.92350	108.15876	4.008660	4.9307216	0.44000000	2.0705155	1.43793814
##	166	92.08786	177.83441	8.420435	4.1379918	1.49089841	3.8068115	4.25484439
##	472	92.37405	147.69970	7.927761	3.2161194	0.94328358	2.0734328	1.49552239
##	407	71.26216	107.55006	4.927141	1.2002556	1.68172135	2.8091180	2.33489561
##	46	103.31743	185.33659	7.054085	3.6657077	1.98216341	3.6237054	2.00632911
##	528	74.58188	114.59293	4.790427	2.5894782	0.61017680	1.3742993	2.32384649
##	124	90.22143	176.49971	8.034423	5.4279977	1.51635112	3.0757315	3.86517499
##	592	59.86383	106.00578	5.280347	4.0776218	0.41783650	1.4236168	1.23905863
##	586	65.31667	124.82013	5.612890	3.2085088	0.44566133	2.2316765	1.76495366
##	601	113.24657	190.69258	6.948368	4.9697329	0.43442136	2.7554896	1.49910979
##	612	84.49055	157.32225	6.121524	4.6408706	0.82466747	2.9643289	1.18561064
##	61	70.59612	133.49662	5.573231	2.9414151	1.86029743	2.7552952	1.99954935
##	216	91.62683	165.90259	10.926017	3.7342787	1.22379778	3.0326757	1.73921085
##	462	59.82190	76.32832	4.422432	1.6489042	1.62784701	1.8418565	1.11001289
##	583	84.70400	158.78963	7.054827	6.3873659	1.67103695	2.2806913	1.27473182
##	346	68.94751	98.83822	4.540121	1.7049180	1.89257981	2.7346851	2.59879206
##	458	90.94786	133.31920	7.064193	3.4269729	2.13133098	3.1130742	1.10541814
##	630	100.81965	59.60709	2.745572	1.7326892	0.17713366	0.9661836	0.74074074
##	510	91.65661	145.57755	9.232375	3.2605753	1.52171461	3.0975747	1.73660462
##	613	88.96477	147.75258	7.353548	2.6276531	0.55063675	1.6094603	0.64342025

##	635	69.65728	50.54801	2.602649	0.8708609	0.49337748	1.2367550	0.45695364
##	429	70.57044	85.91770	4.298507	2.0524520	1.14328358	1.4081023	1.71215352
##	339	71.91100	115.41695	4.908007	2.2235945	1.47529813	2.2572402	2.64224872
##	354	70.47265	113.53351	6.149485	2.3019759	2.05970790	2.0090206	4.81013746
##	400	93.02452	157.34769	10.601335	3.8294903	2.06310680	3.7766990	2.33980583
##	141	101.63137	160.88570	8.848536	4.0247748	0.90540541	2.2505631	2.75619369
##	567	85.82260	133.82521	7.690310	4.4135529	1.37175427	2.5541482	0.98606713
##	91	104.53405	180.31107	10.509229	3.1009772	1.72747014	3.2073833	2.51085776
##	251	58.98529	104.29503	5.030088	2.9051400	1.68909319	1.8700376	3.54784789
##	171	96.59579	179.81153	9.711058	4.2211653	2.17479191	3.3983353	2.70154578
##	347	101.50499	181.96202	8.867914	5.1632653	1.73469388	3.2783447	2.87698413
##	319	68.38975	88.59590	5.906450	1.3229389	2.82571551	2.2879111	2.09354977
##	372	79.70528	112.70759	6.844009	1.9151839	1.65599051	1.5065243	1.29181495
##	320	105.91203	202.44160	10.335929	3.8231368	1.67797553	2.6651835	2.71968854
##	428	85.06867	132.25088	6.531579	3.2631579	1.28011696	2.1783626	1.35789474
##	566	101.33203	164.45724	10.952298	4.1297266	0.99185573	3.0767888	1.44560791
##	359	83.17496	112.05052	3.664543	3.2039144	1.21756941	1.7255348	3.11379153
##	547	66.88386	106.23263	6.446350	1.9683377	0.40325418	1.6094987	1.12181179
##	159	58.37995	133.47151	6.713435	4.8154762	1.84608844	1.9519558	2.55867347
##	77	92.61911	140.74245	8.004737	2.4523387	1.27886323	3.4227353	2.26346951
##	108	92.62585	156.85023	8.028555	3.5751748	2.84848485	3.6299534	1.92890443
##	624	88.69357	64.37068	2.937397	1.6079077	0.26853377	1.0477759	0.45140033
##	76	75.15256	131.76786	6.625446	3.1616071	2.22276786	2.5736607	2.03392857
##	653	91.27332	143.94765	7.487365	3.1696751	0.84957882	3.3604091	0.57160048
##	117	84.61951	139.36183	5.873813	2.4450475	2.63229308	3.8534600	3.01899593
##	207	65.05759	101.39430	5.383333	2.8872807	2.55350877	1.5513158	1.97719298
##	460	65.98862	111.58627	4.627731	3.1052162	1.53366028	2.0949621	2.59206420
##	442	64.78752	87.48097	4.922526	1.9243171	1.10300045	1.6780116	1.52978056
##	370	72.80996	100.53755	4.566096	1.7694335	1.98287220	2.0808081	3.47826087
##	152	87.08045	157.30286	8.590494	3.1773309	3.04570384	2.9597806	2.47836685
##	257	82.47249	145.78932	9.049820	3.2617047	1.96038415	2.4321729	2.61404562
##	484	72.70586	98.13968	6.010252	1.6744981	1.12302435	1.4792824	1.77530970
##	574	105.54155	174.48940	6.723804	4.0290733	0.72259237	4.4379164	1.66747426
##	554	86.51346	173.32519	8.316855	5.6241811	1.61524717	2.7933294	1.51995235
##	392	75.82199	122.17542	5.292828	2.6043856	2.01461855	1.8912746	2.85564185
##	192	66.23753	136.86404	6.028947	3.0771930	1.75043860	2.5223684	3.60219298
##	265	89.94607	154.69882	9.923669	3.3213018	1.51183432	3.2360947	3.33313609
##	275	93.07155	136.88882	7.171711	3.3061700	2.92898719	2.4447031	1.65715949
##	286	102.03916	175.68996	10.574868	2.7751028	1.47504404	3.1456254	1.72284204
##	134	55.32388	122.73845	7.489426	3.1441519	1.74492879	1.9814415	3.38239102
##	69	64.95551	100.83184	5.650915	1.6424010	0.69433802	1.9885057	1.40059600
##	155	96.97703	174.71292	9.592135	4.1410112	2.11573034	2.7471910	1.90505618
##	7	71.28108	153.16064	7.856314	3.7996430	2.16688978	1.9892905	2.17715306
##	436	94.15299	141.62282	7.518919	1.9501502	1.03663664	1.6606607	1.47687688
##	389	89.67972	130.46941	5.271176	2.2500000	1.30764706	3.0976471	1.62529412
##	490	72.14029	120.34588	5.551234	4.9443747	1.60225847	2.2630698	2.70807194
##	673	75.76406	89.50192	6.486556	2.8348271	0.65514298	1.2897994	2.16133163
##	88	82.42451	155.02661	8.973386	1.9949037	1.47225368	2.8363533	2.35956965
##	287	65.25199	122.25340	6.539745	2.5652174	1.65963988	2.1304348	2.53403601
##	414	70.01071	109.68316	7.890191	1.8424479	1.28732639	2.1102431	2.74305556
##	219	68.15058	96.88090	5.138239	2.0144619	1.73585708	2.1607826	1.84006806
##	21	112.43975	199.40296	10.625498	3.9453614	2.58622652	3.5276039	4.54866249
##	471	65.43906	86.68478	6.301304	1.9517391	1.28652174	1.2413043	1.97521739
##	513	67.46192	108.15458	6.152844	1.7854972	1.26356926	2.0503691	1.64220582

##	232	70.59259	114.02457	5.828448	2.9051724	1.63017241	1.8336207	2.49482759
##	250	103.29711	190.61481	12.043378	4.5841527	1.10121457	3.8409485	2.42220937
##	292	67.88531	122.33068	6.343684	1.7494755	2.05707092	2.6168695	4.01133026
##	659	64.82272	91.21673	4.320659	3.9700042	0.35994930	1.5986481	1.17912970
##	164	51.23190	87.81328	5.835118	2.2933619	1.94047109	1.8916488	1.58972163
##	521	80.56169	107.47171	5.725929	1.8163007	0.97255068	2.2934966	2.26942568
##	244	56.86976	113.79678	7.771976	4.1161880	1.87336815	2.7393386	2.54177546
##	584	99.28804	144.84986	7.776232	3.3814493	0.21507246	2.3965217	0.96811594
##	79	62.52742	110.43465	5.329570	2.5258359	2.75293096	2.2835432	2.80243161
##	122	84.78202	132.12473	7.012516	3.9072076	3.29477773	2.7729823	2.77341390
##	652	73.92533	115.69444	5.145399	3.3185764	0.96137153	1.8237847	1.11154514
##	4	52.72795	108.85592	5.928389	1.5481671	2.32864450	2.0068201	2.03154305
##	660	97.15920	137.08620	7.210833	3.6627839	0.32090856	2.7070472	1.03261503
##	644	69.42512	90.31669	4.225551	1.6608406	0.47482314	1.0957137	0.92259675
##	433	69.88169	112.29944	5.801802	4.5855856	1.95195195	1.5928786	2.33376233
##	618	101.86000	66.83752	3.688442	1.4087102	0.11892797	0.6968174	0.67671692
##	600	66.85687	122.14425	6.020665	3.4485413	0.37763371	1.9205835	2.16207455
##	305	67.07445	113.67504	4.063051	1.7257496	1.73500882	1.9537037	2.11640212
##	236	88.39381	137.09113	8.008338	3.7724836	2.56759976	2.9970220	1.86182251
##	448	68.09101	105.60064	4.458640	2.7431066	2.39797794	2.0248162	1.16360294
##	540	81.47447	117.77246	5.626546	2.9859852	0.46248969	1.9398186	2.08821105
##	20	74.37384	127.44459	5.859511	2.5807155	2.25436300	3.2670157	4.33944154
##	325	57.32631	108.80979	5.446436	2.4512462	1.47354613	2.8513336	2.26497595
##	100	74.02415	131.36972	5.150959	2.9543710	2.28443497	1.9872068	4.29083156
##	111	83.73856	126.41054	6.274579	2.8427812	1.47564216	2.4193977	2.54782994
##	637	110.25773	63.98380	3.379971	1.6686303	0.16936672	0.9086892	0.62739323
##	323	54.13606	85.00138	5.005507	1.8517669	1.43414410	1.3588802	1.70353373
##	591	87.04260	158.09379	7.427121	4.4181601	2.30227001	2.3315412	0.85663082
##	223	101.00636	220.00371	9.475248	4.0241337	0.47648515	2.5705446	1.56745050
##	60	91.61267	182.23171	11.535986	3.7513166	2.58045641	3.9210064	1.88706846
##	507	99.56984	178.52792	9.997061	4.0041152	1.04820694	2.6684303	2.74485597
##	394	95.38460	175.48406	11.907320	4.2987013	1.44451004	2.9693034	4.07910272
##	5	94.58566	154.83573	8.842619	2.2825962	2.48133257	4.1045376	2.78058587
##	537	118.28624	194.88312	9.790101	5.0071556	0.69707812	4.3887895	1.90339893
##	59	77.76339	118.73696	6.109332	3.1010979	2.01829826	2.8531565	3.25800549
##	514	93.55648	146.74528	5.854966	2.6166971	1.23461304	2.6112127	1.86532602
##	397	71.05792	83.53611	5.950129	2.2278590	1.65391230	1.4277730	2.24978504
##	260	102.18903	200.03237	9.085344	4.1500883	1.76103590	3.3478517	3.83990583
##	201	78.76764	121.62215	6.836708	2.4640241	1.98621284	2.3425248	2.81818182
##	276	91.12471	166.30432	8.660978	2.9129693	1.76336746	3.4209329	2.26678043
##	664	63.25385	107.55560	5.203238	3.0366425	0.93012356	2.0349382	1.86408181
##	619	85.50528	55.41045	3.197015	3.9582090	0.08507463	1.0104478	0.74477612
##	534	82.66572	138.84164	6.416010	4.0363080	1.08486439	2.6010499	2.61942257
##	417	113.38626	178.22954	10.076512	4.8036773	1.26927639	3.3576512	4.02787663
##	262	84.56846	144.62804	10.077636	6.2717265	2.73638470	3.1031286	2.47566628
##	598	79.84304	128.32685	4.639746	4.0109937	0.79788584	2.2389006	2.53361522
##	255	102.52265	192.22510	10.714791	4.5539187	2.24219210	4.0135533	4.31938715
##	71	95.14540	169.13515	7.133447	2.8001136	2.12549688	3.1067575	2.88472459
##	191	97.29819	190.03892	10.433533	4.1826347	1.91197605	3.3982036	3.03113772
##	182	71.13618	127.18292	6.217860	2.4365833	3.09275237	2.0043141	2.63028473
##	39	61.49507	111.17154	6.622958	1.8804815	2.68228719	2.4922614	3.01289768
##	597	88.77522	147.57913	8.057339	3.5263761	0.24082569	2.3233945	2.23107798
##	647	101.13061	181.34736	7.670421	4.0071132	0.28571429	3.3965619	1.94250148
##	383	106.45614	198.24207	10.502439	2.8908537	2.62743902	3.6109756	2.78902439

##	504	96.20825	164.28227	8.737492	4.2044472	1.94070414	3.2445954	1.33848054
##	183	103.90922	174.69466	7.153846	3.2389900	2.74104521	3.0651791	2.33646506
##	89	80.37048	118.12055	6.045207	2.0418585	1.37672666	2.2536626	2.10422771
##	473	92.40858	154.39916	7.956444	2.4427208	1.48150358	2.7750597	2.06861575
##	90	98.51806	164.54162	9.080347	4.0086705	0.62774566	3.0890173	3.35491329
##	424	85.48550	155.05204	9.766410	2.9278533	2.08456535	3.1395624	2.94086339
##	252	65.38152	113.39395	5.520158	2.8492550	1.68141981	2.8847502	1.79929886
##	496	92.04960	149.91901	7.056289	5.0057438	2.21424469	3.7179782	2.31476163
##	463	68.52896	110.29323	5.608021	1.9184994	1.16990082	2.6390686	2.00862441
##	535	71.08877	137.29197	7.423358	2.2610562	1.42765135	2.2589094	2.26320309
##	199	83.09852	148.39133	9.127595	4.5384615	1.02258852	2.7588523	1.84432234
##	87	58.37467	112.04848	6.039665	3.1203173	1.68796827	2.5614808	2.47509916
##	197	79.80212	136.26610	5.858898	2.6377119	2.50338983	3.7203390	3.48516949
##	291	98.57998	163.83007	10.322638	2.5769459	2.71479501	5.0207962	3.70528818
##	432	71.14411	96.01144	5.831866	2.0959507	1.20730634	1.4722711	1.90228873
##	336	63.62954	111.03949	6.081176	2.7586661	1.33172444	1.8960070	1.53576130
##	651	89.61813	125.84867	6.125303	3.5738499	0.72154964	2.2009685	1.35472155
##	157	61.79365	126.05489	7.279160	2.3584906	1.52272727	1.7302744	2.79674099
##	331	65.87382	105.56358	5.963667	2.5754119	1.20194339	1.8170680	2.24799324
##	571	91.09031	109.62281	5.750305	2.4044807	0.46843177	1.9466395	1.45091650
##	74	100.04136	172.75560	7.861464	5.3424077	1.42105263	2.9776165	2.35753176
##	640	109.50825	53.42279	2.215892	1.6341829	0.00000000	0.8950525	0.50074963
##	524	96.60028	151.73713	5.355689	3.8556886	0.58023952	1.8275449	1.45449102
##	72	63.11050	118.81436	5.326678	2.5866610	2.32200510	2.2468139	2.86618522
##	447	97.36820	151.73758	8.678551	4.3085915	0.96201052	2.4576271	2.44009351
##	670	106.37665	155.00975	4.793578	5.0349771	0.30103211	2.8824541	1.93807339
##	64	75.34488	130.73522	7.884263	2.2202331	1.88384679	2.9258951	3.18359700
##	363	69.71088	118.69547	6.622327	3.1668092	1.44952951	2.0008554	1.86954662
##	399	70.58468	125.02058	5.325493	5.0751785	2.21797564	1.6694666	1.96220076
##	115	93.29301	188.08041	9.069684	4.4079809	1.70577725	3.1828469	3.11137582
##	650	61.25901	115.12938	6.322208	5.3374536	0.51215492	2.2076638	1.06798517
##	493	94.37301	156.99272	8.302352	2.5123180	1.70156775	2.3219485	2.54367301
##	66	100.89524	163.96563	8.031097	4.6683033	2.07255865	2.5913803	2.25968358
##	421	50.66490	107.79250	4.879250	1.1948561	1.62685266	1.5496949	1.15518745
##	148	97.02916	162.03027	7.865471	3.7634529	2.59697309	3.1059417	3.43834081
##	559	85.37696	119.94709	7.808936	2.9894180	0.41681364	2.0252792	1.14638448
##	385	76.24441	107.09363	4.990030	3.7325531	2.28651929	1.6814044	2.01517122
##	302	110.51818	165.15330	7.275943	3.7311321	1.79186321	3.7582547	2.87912736
##	437	64.19873	129.04149	8.363440	3.7191011	1.59853068	2.5721694	2.14477096
##	452	87.43019	162.97763	10.112419	3.8181283	2.31959976	3.5785756	1.79105356
##	290	74.63957	139.09647	5.750000	4.2436594	1.77400362	2.6594203	2.79030797
##	226	64.09290	126.97693	7.145075	3.4272405	1.46938776	2.6814552	2.51464064
##	621	79.00900	51.22741	2.817771	2.0843373	0.00000000	0.4548193	0.32379518
##	53	94.66790	176.47224	8.691993	3.6458212	2.15137347	4.0672122	2.10812390
##	154	64.36187	106.25400	6.708259	2.3761101	2.42717584	1.9982238	1.92273535
##	667	79.18861	100.27551	4.683281	2.7268446	0.60792779	1.2574568	1.79631083
##	301	97.27891	155.87254	7.155272	4.2450753	1.24623407	3.5683662	2.31344148
##	497	110.38812	170.99426	9.760046	3.5786452	1.71814007	4.3679679	0.82032147
##	309	66.50209	105.71853	6.246552	2.6258621	1.93706897	2.0193966	2.05258621
##	585	72.11943	107.67234	4.195183	2.3687708	0.89991694	1.7686877	2.86586379
##	409	80.23700	121.76741	6.598565	2.8100464	2.07260447	2.4136767	2.33136344
##	373	81.09484	95.08777	4.521091	2.1367703	1.57477631	2.0656157	2.47507456
##	67	71.56730	136.47828	6.736288	2.5094340	1.61474331	2.3523475	2.19131198
##	614	66.57988	131.96108	5.800175	4.7853083	1.43550503	2.2719720	1.64538697

##	322	81.68376	151.59769	5.219805	4.2273535	1.32815275	2.7455595	2.77975133
##	636	110.06316	68.35781	2.546875	1.7546875	0.61562500	1.0671875	0.49843750
##	202	100.55756	163.31887	9.266782	3.6591435	2.33912037	2.5949074	2.25636574
##	582	99.69109	124.98480	6.789474	6.3461988	1.53567251	2.7286550	1.00760234
##	405	63.46561	106.66853	4.378762	2.3267412	1.73344798	2.1736887	1.91057610
##	218	66.53780	109.26169	5.943071	2.9426302	1.78993822	2.3742277	2.25860547
##	68	54.59513	121.48746	5.467294	3.1895161	2.43458781	2.3476703	2.25761649
##	303	92.20220	142.73573	9.860506	3.5538552	2.34078870	3.4896998	2.02472042
##	310	85.93030	152.62640	9.106070	3.9911609	1.88568061	2.8102534	1.82321744
##	544	73.93840	95.49299	4.645134	2.0335742	0.80450489	1.5792605	1.13727157
##	238	61.86027	113.11248	6.295382	4.1760402	1.53086420	2.6630087	2.54229538
##	615	87.33002	58.14428	2.912106	2.1592040	0.05472637	1.5074627	0.41293532
##	181	69.02863	115.15411	5.958904	3.8578767	1.53767123	1.0834760	1.89469178
##	562	88.62678	153.77917	6.542262	4.4363095	1.53333333	2.0130952	1.27500000
##	341	78.89709	94.51550	5.832903	1.2136090	1.62747631	1.3880276	1.19465978
##	446	78.62741	92.37592	3.978852	2.4881312	1.21320673	1.5502805	1.35261114
##	137	59.73678	98.60537	6.563392	2.5577672	2.18260493	1.5106015	1.54954565
##	374	103.89748	187.52232	10.704348	5.8388406	2.05507246	4.0481159	2.54724638
##	672	103.85323	186.98730	7.718245	3.1911085	0.29907621	2.2713626	1.00635104
##	23	94.59733	160.41748	7.592804	2.1250714	1.49685894	3.0593946	2.66190748
##	213	85.24673	143.59240	9.342105	4.0052632	2.06081871	2.8391813	3.68187135
##	443	70.77302	113.59603	6.950406	2.2660054	1.33994590	1.6348061	1.74301172
##	381	76.59245	117.21486	8.444069	2.2342761	2.78218658	2.0540312	3.46390882
##	212	83.28086	130.80127	7.249659	4.1250568	2.23965439	2.3155980	3.17280582
##	494	64.46761	108.56057	6.262558	3.1979738	0.77669903	2.1823554	2.22836640
##	542	71.45392	120.16862	5.806208	2.4576342	0.90687919	1.3984899	1.80201342
##	280	93.39236	182.63621	7.681319	3.1954887	1.31578947	3.5043378	3.17408907
##	431	101.83539	159.09247	7.135274	2.9834475	1.27968037	3.2226027	2.07762557
##	18	61.57239	103.07181	4.833921	4.5105727	2.04757709	2.0955947	1.20881057
##	312	75.28354	131.03099	6.123117	2.5436935	2.34093844	3.3181231	2.06371072
##	278	67.15412	116.15599	5.056562	2.2567388	2.03623509	2.2996023	2.13831198
##	556	74.12177	119.30867	5.535026	1.4391419	0.77232925	2.1335377	2.95402802
##	180	100.10918	172.49912	8.052539	4.2393462	3.49737303	2.9007589	1.57384705
##	209	70.68471	126.48408	6.207588	4.2686437	2.93109464	2.2420410	2.39293502
##	19	85.81999	119.40897	6.599223	1.9016393	1.71354616	3.1919758	2.33822261
##	177	93.67488	184.90323	8.904399	4.1724340	3.22873900	4.6627566	2.67331378
##	150	78.00602	102.10713	5.348491	1.8898120	1.54569305	2.0559685	2.88194141
##	476	62.41635	113.89435	5.893913	1.9169565	1.19869565	2.1552174	2.25913043
##	109	68.20594	149.57169	7.753381	5.4571686	2.16771867	3.4129847	2.91388638
##	470	69.15946	119.80849	6.355414	1.3762208	1.28704883	2.9889597	2.52611465
##	627	117.09227	77.60033	3.533442	2.1321370	0.18597064	0.9347471	0.61174551
##	93	62.05267	117.85494	6.061728	3.3350970	1.73015873	1.9876543	2.24514991
##	445	87.01704	119.62470	7.871718	3.5250597	0.89021480	3.0644391	2.61933174
##	84	64.50095	134.21004	7.304367	4.3528384	1.50131004	3.0868996	2.79694323
##	456	96.03976	130.67976	5.785714	3.2821429	1.26011905	2.7488095	1.73750000
##	382	98.72808	158.13773	7.031250	5.1730324	1.97743056	2.6921296	2.40972222
##	50	74.57619	146.44009	5.187879	2.3608392	1.87272727	3.3300699	2.85128205
##	416	94.97102	196.82881	8.104882	2.9276673	1.77154913	3.7082580	2.95539482
##	92	70.54641	104.02014	4.975828	1.7618621	1.77663384	1.6857654	1.96687556
##	641	75.50915	43.16306	2.046589	1.4808652	0.09484193	1.0399334	0.24459235
##	530	94.91774	174.85204	9.891767	3.4732297	0.47035118	2.7904433	0.92515832
##	247	91.05217	192.09096	9.045775	4.5504695	2.26701878	2.7734742	4.17781690
##	196	86.96065	150.51899	8.406214	3.1743383	2.60586881	3.1438435	3.69390104
##	314	66.47556	123.94394	8.359638	2.1358344	2.10004312	2.5002156	2.06899526

##	665	50.57897	81.67898	3.980467	1.7558386	0.63439490	1.5609342	1.15711253
##	594	75.79834	121.84020	6.057775	2.5832821	0.30915796	2.4185618	0.91518132
##	379	68.47758	77.72948	4.260315	1.9025946	1.33475117	1.8119949	1.95746491
##	272	56.04422	106.22439	7.371016	1.7390565	2.11432214	1.8712282	3.87420314
##	96	104.40370	169.39324	8.806197	3.3566197	3.66422535	4.5250704	2.66591549
##	351	69.81327	95.66853	4.680550	2.1210820	2.32717905	2.0759983	3.86002576
##	98	95.52911	154.42426	9.892369	2.1976082	2.94533030	3.0768793	2.80751708
##	264	87.52135	135.30545	5.643573	4.1503268	1.68714597	2.5002179	3.42875817
##	506	69.90957	129.45866	5.639535	2.0719208	1.48062016	1.8428079	1.94013781
##	47	92.21550	123.82140	5.119651	2.0720524	1.41397380	1.7227074	3.69126638
##	172	107.62083	136.52246	7.097034	3.4542373	2.59322034	2.8423729	4.08347458
##	411	101.36611	206.44451	9.671838	4.5668258	2.39439141	4.2213604	3.71002387
##	151	80.37236	157.50107	6.875161	2.7044187	1.75461175	2.8931789	2.64736165
##	103	96.55285	159.61725	7.577082	4.4477259	1.58062611	2.6668636	3.66981689
##	378	72.38193	78.08520	3.954819	1.7882960	1.34939759	1.9160929	1.66910499
##	268	97.54038	143.18496	8.531837	3.2055791	0.87325652	3.2686477	2.05821710
##	11	78.18096	126.41615	6.009709	1.7541924	2.75904678	2.0467785	2.47308032
##	45	81.58950	120.29297	6.427083	2.0824653	2.31987847	2.6501736	3.20225694
##	365	84.85339	114.41265	4.762048	3.1660929	2.06067126	2.0430293	2.97074010
##	139	70.90401	113.97412	7.460331	3.2049215	2.55324565	1.4828171	2.75774289
##	575	106.52160	190.35840	10.282609	5.7144536	0.43889542	3.2673325	1.39835488
##	671	79.84393	131.06384	7.339472	3.9158993	0.81215470	1.8152241	0.72989564
##	604	103.27886	182.74338	9.203649	6.2136551	0.34432019	2.4738081	1.34902884
##	187	61.42893	114.94626	6.080161	3.4626064	1.84997761	2.0658307	2.84326019
##	16	99.50120	130.21374	7.196970	2.5573593	2.28138528	2.4783550	1.34415584
##	565	78.11917	138.62365	6.965186	3.8031212	0.65246098	2.4177671	1.17406963
##	607	61.28582	110.49663	5.962121	2.3737374	0.71590909	1.5340909	0.89941077
##	413	78.08956	121.66088	5.634866	2.1283608	1.42150911	1.7918474	2.00607112
##	185	81.15222	120.76885	6.995708	4.4825261	1.82587370	2.1189454	1.56161864
##	477	63.31530	115.30301	5.459516	1.6949082	1.23288815	1.9127713	2.31594324
##	500	61.82127	97.93313	6.295997	2.7380750	1.09284497	2.2082624	3.06218058
##	145	96.17689	132.69678	7.335420	3.6797853	1.78667263	2.8466011	6.12209302
##	337	99.39380	171.68002	10.540670	6.2290670	3.65669856	2.9252392	1.77093301
##	51	72.66664	132.92447	6.185585	2.9762624	2.31722054	2.5895555	3.41432887
##	406	67.99232	101.44981	4.235917	2.4066074	1.65014824	1.6285472	1.61329945
##	377	64.70150	86.40231	4.958282	1.4956629	1.70549360	1.9640644	1.38744321
##	116	102.49969	189.05062	9.592113	6.5509123	1.86109476	4.2036492	4.82754562
##	113	98.14828	172.01370	8.821918	4.7617630	1.70935080	2.5544967	2.79988088
##	311	59.15604	89.63497	4.389571	2.0876424	2.29754601	1.7212971	1.67440841
##	25	79.79721	118.39102	6.193429	3.4844979	1.34474780	1.4465525	1.82646923
##	2	98.36605	167.64380	8.578616	4.6197827	2.83190395	4.1052030	3.29959977
##	266	76.02731	119.50043	5.511236	2.4688850	1.71261884	2.6244598	3.34356093
##	560	105.43145	183.72108	8.837346	3.7668820	0.45214328	3.4850264	3.01467998
##	393	59.03490	103.84894	5.038285	1.2521848	1.83395755	1.5035372	1.48023304
##	454	70.68742	116.31984	8.162341	1.5552134	1.69379674	2.3062033	2.89749230
##	631	114.75585	67.84365	3.518576	3.5650155	0.02631579	0.9411765	0.67647059
##	355	99.69112	155.56367	6.255235	3.5738540	2.53763441	4.1069610	2.32597623
##	221	85.45190	151.95109	7.334708	2.7849146	1.51856217	2.4130819	4.20094284
##	576	61.11274	109.37258	4.914368	3.0934541	0.50761630	1.7809798	1.83985179
##	395	55.14448	75.15998	4.259816	2.1733500	1.09857978	1.0329992	0.63450292
##	633	91.49840	54.90224	2.825321	3.0849359	0.15064103	1.1121795	0.45032051
##	249	95.67778	188.95220	10.856611	2.6412166	0.65673495	3.6765984	2.81874612
##	277	55.77611	111.19815	7.471865	2.4264469	1.63504823	2.1957395	1.85490354
##	529	63.95797	109.49700	6.272494	2.7819195	1.03856041	1.4473008	2.93616110

##	459	94.05691	133.72768	7.231836	2.9467554	0.79700499	2.7293400	2.24459235
##	662	94.49062	137.86044	9.485006	3.0801615	0.61649366	2.1585928	0.92272203
##	451	91.31615	138.73703	8.683959	3.5295170	1.24329159	2.4525939	1.99582588
##	348	88.72935	134.50790	8.177882	3.3428906	2.97191340	3.2018724	1.10298420
##	526	93.05072	172.68839	11.182962	4.0588908	1.39851344	2.9022298	1.31732419
##	638	85.91002	49.59966	2.430486	2.0988275	0.06532663	1.1139028	0.38023451
##	35	80.66096	148.07545	6.940801	3.1671503	2.04004643	4.4695299	1.70748694
##	489	69.02566	97.95002	5.277071	2.4853135	1.60675142	1.3077598	0.85576502
##	654	107.75891	175.51005	9.304965	3.9119385	0.32860520	3.8829787	1.82033097
##	229	91.72712	167.83051	9.146893	4.3197740	1.32203390	4.1118644	4.30508475
##	646	86.25283	146.05071	6.719929	4.0795991	0.70341981	2.1521226	0.96580189
##	317	68.63903	123.03370	6.278337	3.8787746	1.26301969	2.5212254	2.51159737
##	425	63.03639	103.12560	5.520715	2.6306149	1.80462276	2.3602268	2.18098561
##	488	91.16989	152.16131	8.650976	2.7698048	0.85304248	2.4253731	1.44259472
##	99	95.70939	209.22617	9.609969	4.6915888	2.07165109	2.6429907	2.84610592
##	205	92.36055	181.79279	9.270871	6.4990991	3.53813814	3.8984985	2.32312312
##	533	92.45301	154.77011	8.448276	4.8681186	1.97398669	2.0217786	1.32244404
##	81	89.98641	125.63824	6.503445	3.0671835	1.25236865	2.8535745	3.00645995
##	1	72.81255	130.22471	7.748170	2.9995695	2.55187258	2.8385708	2.59621180
##	367	105.38808	167.51396	9.935613	2.5732194	3.22849003	3.9829060	3.97834758
##	283	97.65823	188.88817	11.881148	4.6469555	1.54800937	3.6920375	2.65222482
##	13	89.14055	153.52486	7.493064	4.4930636	1.14971098	3.5913295	2.34739884
##	208	95.93542	159.61432	9.324308	3.2641396	2.59506619	3.6793020	1.71720818
##	527	76.15031	123.82348	5.296558	3.6597529	1.07943513	3.5008826	3.09046778
##	161	54.59305	105.09280	6.241273	3.7375166	2.44321697	1.5877154	2.28457799
##	475	87.25964	154.59699	9.205559	4.9542559	1.69368848	2.7782281	1.86797915
##	512	68.82357	114.06777	7.319421	2.8785124	1.05206612	2.0016529	2.10950413
##	9	66.45311	120.95234	5.158874	5.9636859	1.72174308	2.7076714	4.04130731
##	420	78.99955	126.56386	6.968402	4.4886515	2.59590565	2.8246551	3.94882065
##	289	65.47052	106.06743	6.694232	1.9083969	1.36726039	1.8893130	2.66030534
##	195	83.79984	126.74282	7.435389	3.2816723	2.80574324	2.5333615	9.16596284
##	269	70.61636	141.32715	6.709158	4.8712871	1.61344884	2.7632013	4.07136964
##	335	103.68412	161.54960	8.570696	2.6014823	1.47263398	2.7645382	3.13625998
##	17	61.16510	104.56142	4.963636	2.2088692	1.79334812	2.3232816	1.76319290
##	297	65.49904	101.43599	5.998702	2.5203287	0.82352941	1.8153114	1.95674740
##	666	69.13099	114.90894	5.809718	2.7950184	0.83176807	2.4365047	2.36178032
##	623	85.17463	49.55025	2.497529	1.1630972	0.05930807	0.8945634	0.09390445
##	190	103.78418	194.18870	11.535236	5.9825277	2.65055329	3.6668608	2.96563774
##	295	76.43308	139.21540	5.963820	3.8977703	1.81783761	2.2410602	4.15776188
##	222	77.16002	123.75022	6.516129	3.2585004	2.66303400	1.6970357	3.56277245
##	501	95.81393	192.06302	9.081861	3.3115430	0.52885748	2.7709069	1.63074205
##	464	91.39486	130.22526	7.017462	3.9161816	1.51804424	1.9860303	2.64668219
##	140	103.27556	201.79321	11.463647	5.8980930	1.08462455	3.0464839	3.76638856
##	176	72.66898	123.71990	6.596029	2.7993095	2.02373759	2.4570565	2.73154942
##	558	74.49686	130.68365	5.271404	3.2551370	1.13827055	2.4280822	3.17080479
##	546	100.41256	147.70568	7.947338	2.3446460	0.31246343	2.5137507	0.81100059
##	102	85.13972	130.79431	7.644888	5.2613430	2.30913491	3.3823351	1.78705384
##	12	83.63459	141.03063	7.156455	3.8457330	2.94748359	3.1920131	2.16411379
##	430	84.17330	125.33412	6.937647	2.8147059	2.14764706	2.3617647	2.36117647
##	350	70.90134	98.18333	5.480576	1.6014841	1.52597119	1.7018769	1.13094718
##	516	86.97944	151.52428	8.007607	3.1357519	1.39204213	3.1954359	1.23171445
##	14	77.61998	116.46481	6.371674	2.8695279	2.06480687	3.1296137	2.37553648
##	577	67.72028	109.86818	5.673768	2.8379938	0.60097648	2.5548158	1.88371061
##	403	96.57388	134.38842	5.445718	2.7478890	1.72798552	2.0283474	2.06031363

##	10	88.45417	133.56058	6.111111	2.0854271	2.64489112	2.8877722	2.42713568
##	531	87.97001	157.47362	9.501172	3.6189918	0.40152403	2.6060961	3.80480657
##	342	97.07177	141.00556	10.006790	2.2049383	2.32469136	3.5419753	1.76666667
##	465	73.97741	108.58173	7.239073	4.6630245	1.53015734	2.2849650	1.55201049
##	210	87.35650	143.68639	8.769822	4.1668639	2.47159763	3.0633136	1.62840237
##	132	67.26063	110.12310	6.412014	2.6780880	1.83671743	2.4479695	2.35956007
##	390	58.58986	99.16530	5.671990	2.0030211	0.90936556	1.2205438	1.32714717
##	228	93.44973	175.55922	10.529758	5.3912787	2.54743665	2.9634649	2.74425457
##	271	73.22868	116.58704	5.361555	2.4336933	1.51965443	2.4423326	2.11231102
##	520	63.79027	92.00777	4.037549	2.4436772	0.53992231	1.6167458	1.25679758
##	304	52.14410	82.68399	5.884664	2.6459654	1.37727081	1.4985213	0.71482890
##	133	84.32506	120.51574	7.203401	3.5743073	1.25566751	3.3211587	1.45969773
##	28	102.51983	180.39932	9.980823	4.9379583	1.98477157	3.3276932	2.18838127
##	561	70.13142	123.19984	5.540783	4.0966558	0.92332790	2.4086460	3.81566069
##	200	69.61915	131.42571	6.982546	3.1988080	2.00042571	2.5295871	2.91528310
##	144	67.66739	101.62623	5.632208	1.4498078	1.28705681	1.9978642	1.91755660
##	274	68.45048	100.25271	6.928393	2.5516236	1.80141549	2.4254788	2.46378018
##	376	76.00277	115.67032	5.427069	2.9967993	1.80109739	1.9620485	2.90580704
##	293	96.15993	169.82139	10.081503	5.5352601	1.80115607	2.7202312	2.45375723
##	225	66.54126	98.82194	5.933763	4.3010753	2.58967742	2.0133333	2.86795699
##	444	98.58106	166.73849	7.711334	4.6735537	1.77685950	2.5649351	2.26682409
##	332	66.78067	125.35247	5.893636	2.0689809	1.04806409	1.9203382	2.21495327
##	149	90.88315	165.59187	8.332323	3.6373560	0.85385082	3.7562159	2.48150394
##	628	85.12878	46.67091	2.214626	1.4992051	0.25596184	0.6311606	0.40063593
##	263	65.78013	113.70914	5.866303	2.0058676	1.91156748	2.5783738	2.02849958
##	384	91.21125	143.02587	6.926594	2.8628159	1.44524669	2.9332130	3.21600481
##	388	92.08813	158.99518	10.219145	3.7736303	1.75918122	1.8404576	1.68934377
##	356	93.16235	161.84778	8.372365	2.8559719	2.99707260	3.4215457	2.22950820
##	358	73.47901	109.02947	5.985684	3.2597895	2.43873684	2.5073684	1.89810526
##	130	101.62442	173.79867	8.106088	3.6751055	2.72754671	3.8354430	1.30681133
##	629	85.35897	48.64599	3.579425	2.3540091	0.00000000	0.6323752	0.58547655
##	481	86.91298	148.53867	7.322545	3.9341744	1.97805815	2.7520570	2.51014811
##	83	99.33833	165.19016	9.373043	3.0324385	2.68903803	3.1331096	1.42673378
##	112	57.01903	111.91988	4.926375	3.2213079	1.81637072	1.5972282	2.39454309
##	386	88.38669	118.49543	5.329068	2.2362888	1.15630713	2.1965265	2.50228519
##	455	71.43153	122.85789	7.409707	4.1460429	1.93922169	1.8736336	1.58154788
##	211	53.00695	92.03821	6.164019	3.0420781	1.29884070	1.5156720	1.34607128
##	75	75.58929	120.83976	5.164321	3.1643214	1.56922379	3.0118021	1.75170222
##	97	83.30486	124.87610	5.592152	4.0630511	2.60714286	2.7632275	1.71781305
##	8	91.58909	167.66533	8.733982	3.3283753	2.52402746	3.5085812	2.91075515
##	609	94.73418	131.38616	5.083974	3.3749261	0.66351271	1.8497930	0.47309284
##	491	72.28481	105.51932	5.479406	2.1447983	1.28237792	2.1180467	1.06242038
##	136	79.55163	129.61478	8.213281	2.8751099	2.00175901	2.5391381	2.99252419
##	328	102.07177	178.07496	7.560139	3.6682162	1.63160953	3.3538640	2.92446252
##	241	102.96440	174.43171	9.084476	4.8782227	1.76247943	3.2759188	3.01206802
##	423	82.23107	123.42697	7.018257	2.9381625	2.12190813	2.6654888	1.15842167
##	55	89.21877	179.48739	9.916129	2.4392962	2.44926686	3.1319648	1.79765396
##	581	71.61366	113.29992	4.567657	3.9273927	0.96245875	2.3197195	2.12128713
##	398	53.18556	90.60403	4.565996	1.3744966	1.49619687	1.8259508	2.14451902
##	121	110.47859	191.95777	8.108671	4.5754505	2.93750000	5.4673423	4.37331081
##	580	97.28371	163.46230	8.796026	5.2542373	1.80713033	3.1110462	1.38047925
##	434	71.19373	98.45172	4.576293	2.3538793	1.29051724	1.4633621	1.61465517
##	483	86.19967	104.18584	6.411062	1.7256637	1.45265487	2.0101770	1.42743363
##	56	67.44605	147.38686	5.948216	2.6166232	2.12663185	2.6475196	2.23237598

##	306	63.73025	103.89225	6.978364	2.5668542	2.76244050	2.2778018	2.44223280
##	160	91.08532	171.85782	8.733492	5.2700773	4.05234979	4.3016062	2.37001785
##	569	74.92099	120.09637	5.171011	2.6338863	0.72037915	1.9332543	2.19668246
##	655	85.69003	162.16823	7.487691	4.1395076	1.82883939	4.1694021	0.75029308
##	189	67.19497	93.23116	5.207875	2.5368332	1.43310754	1.4902625	2.43353091
##	261	69.36033	114.82002	6.807401	2.4444912	2.11354079	2.1110177	2.18923465
##	52	101.25940	177.78430	10.186335	4.4359119	2.15584416	4.0197628	2.70468662
##	329	92.12216	180.81784	6.793342	2.9842965	2.17399497	3.9315327	1.69221106
##	658	50.66467	73.66931	3.317726	2.0250836	0.57692308	1.1592809	0.91095318
##	326	87.92339	145.45025	7.920398	3.1069652	2.99129353	2.4378109	3.04104478
##	227	69.80133	133.79048	6.789648	2.9946170	1.85838509	2.3946170	2.66128364
##	509	84.69616	163.41379	10.436782	3.3460375	2.19540230	2.4452511	1.80338778
##	318	98.59146	174.25146	9.878947	3.2801170	3.14912281	3.8988304	3.63040936
##	352	69.50767	109.70389	7.557552	2.2071031	1.69833119	2.0094138	2.79974326
##	579	63.61384	89.97255	5.206926	2.3610642	0.63133446	1.9176520	1.97761824
##	230	83.34939	115.60701	6.233432	2.3659772	2.76656817	1.7332208	1.24609540
##	246	72.88157	115.67435	6.628261	2.4991304	2.43695652	1.9360870	4.00086957
##	563	58.93854	114.16117	6.179357	3.1895093	1.45516074	1.9653130	1.81260575
##	31	64.61195	109.56341	6.303137	1.7574017	2.40433053	2.1493593	1.91338931
##	126	61.26242	121.87238	7.846591	2.9873252	1.87543706	2.5681818	3.77972028
##	313	91.86209	165.10331	8.879843	4.6215609	3.42391915	2.3913532	2.39416058
##	242	92.43784	171.85995	12.617322	4.0730958	1.63759214	4.3679361	2.12039312
##	120	81.29005	132.12656	5.136892	2.5901851	1.94145502	2.6965131	4.14377960
##	101	59.87214	116.51575	5.964129	2.0568679	1.27909011	2.7992126	2.79002625
##	616	110.33465	80.10114	2.807504	1.7634584	0.07504078	0.5938010	1.21207178
##	419	79.94457	146.45809	8.203660	2.3016529	1.19893743	3.2030697	1.74203070
##	557	59.27522	108.26223	4.901349	2.3364250	0.70699831	1.8819562	1.92706577
##	78	83.50199	142.18197	6.222404	2.4344262	1.64043716	2.8010929	2.78579235
##	217	73.45244	130.82576	5.794563	3.0115865	1.69607843	2.4884135	4.30392157
##	43	54.28098	111.46348	5.082223	4.9940285	2.18925126	3.0868167	1.05466238
##	632	110.07950	57.37519	3.251163	1.9348837	0.08062016	0.7596899	0.31937984
##	284	55.21417	103.30344	4.612410	2.1347216	1.65278368	1.9906502	2.38589035
##	552	72.56241	109.74021	6.085053	3.1069474	1.09010526	2.1861053	1.74989474
##	570	60.44746	95.91768	6.059758	3.9201839	0.57584622	1.6155453	1.27371500
##	194	71.83941	126.10420	6.559107	2.9960595	1.34851138	3.6882662	2.58099825
##	661	67.56888	94.45336	5.698319	4.2563025	0.68193277	1.2155462	1.19831933
##	453	75.43059	119.34323	5.899785	2.8516129	0.95784946	2.1969892	1.67612903
##	294	85.60387	128.80549	8.141939	2.8393692	1.68049065	2.2955607	1.71261682
##	156	65.41337	85.32873	4.214255	3.1282937	1.60215983	1.1762419	1.41123110
##	362	110.32693	194.53946	10.163133	3.5683157	1.33568905	3.4110718	4.32096584
##	285	55.97613	111.80668	5.557557	2.5856766	2.36950791	1.9340949	1.60369069
##	578	55.89255	102.36982	5.864044	1.3847798	0.80589996	1.6297563	1.47498931
##	220	63.27981	104.91753	7.046392	2.3234536	2.95189003	2.2152062	1.19716495
##	142	85.05389	133.02648	7.176840	2.6665171	1.84156194	2.1777379	4.00448833
##	15	103.32633	165.84968	8.995890	2.4474457	1.85320023	4.7310628	3.49911920
##	608	69.43776	96.12833	4.790078	2.1332513	0.45018450	1.9876999	1.20049200
##	300	75.26556	127.17981	7.759118	2.1586090	1.89270568	2.2531807	3.55428329
##	163	99.61165	161.99656	8.532989	4.3316122	2.48020654	3.6115892	2.66035571
##	548	66.07524	106.43729	5.787371	4.1735395	0.68814433	1.4523196	2.22895189
##	634	104.57073	63.90348	3.014241	2.0332278	0.58386076	0.7468354	1.36550633
##	555	86.16041	153.67537	10.624858	3.2570942	1.52270148	2.2786606	0.87854711
##	511	65.95902	113.91868	5.850838	2.7772783	0.43032284	1.6383327	1.57621577
##	368	75.02521	84.34140	4.211890	1.8632696	1.62038217	1.4339703	1.45265393
##	70	97.28282	126.08923	6.572747	3.0769231	2.29934066	2.2716484	2.12967033

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## 239 95.48564 169.38915 10.530989 3.4159714 1.91537545 3.9868892 3.55363528
## 123 102.83527 171.86694 7.607855 4.7502931 1.18522860 3.4853458 2.09261430
## 333 72.78399 105.76672 6.216765 2.4161727 1.85393734 1.7459780 2.53895004
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## 330 97.62472 184.97985 9.480464 2.8162393 1.43406593 3.6190476 1.81074481
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## 538 86.46053 182.91657 11.899408 3.5260355 1.04142012 2.9603550 1.60059172
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## 440 93.90915 145.17379 8.672323 2.3984786 1.28613224 2.4757168 1.38150965
## 449 68.68872 116.21310 5.221608 2.3726074 2.02892386 2.2433007 1.99659719
## 606 77.76424 114.01584 5.498124 3.0821175 1.06419341 1.5656524 1.93497291
## 418 74.48207 100.35265 6.074336 3.1353982 0.94823009 1.4084071 1.49823009
## 550 57.05548 94.74690 5.798715 1.6068522 0.79357602 2.2492505 1.82569593
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## 106 62.49911 98.18713 5.830652 2.8010161 1.68882303 1.6883997 2.25359865
## 184 70.55519 129.08059 6.631224 3.4531646 3.22742616 2.6489451 2.94641350
## 188 91.79325 153.32763 8.723744 4.4634703 2.82876712 2.4606164 2.63242009
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## 539 86.56993 141.71486 9.511857 4.3620590 0.88895315 3.0844419 2.06882591
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## 485 88.50802 157.06190 10.154167 2.8250000 1.74821429 3.2154762 2.26607143
## 573 70.52719 95.11983 4.778214 3.5433551 0.62222222 1.7481481 1.65490196
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## 34 91.94653 151.64566 8.505602 4.4929972 1.37208217 3.0172736 3.26283847
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## 536 94.39718 149.94912 7.607602 3.4187135 0.64502924 1.7140351 1.22280702
## 487 100.48894 161.14206 7.466295 4.7431755 1.62172702 3.7392758 1.56044568
## 338 75.56623 128.49530 5.576133 3.5769889 1.70573139 2.7446536 1.82378101
## 94 68.04098 102.97901 5.358612 2.0291345 0.66880891 1.8526135 2.46915167

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##	343	74.57569	101.59107	5.412434	2.0630473	1.77495622	2.4400175	2.85507881
##	204	72.19494	129.89712	6.537472	2.4594235	2.47095344	2.0363636	2.85410200
##	104	71.14359	106.87221	5.557890	2.9845626	3.77615780	2.6569468	3.82675815
##	107	67.88648	122.56985	4.757113	2.7872611	2.17409766	2.1409766	2.39193206
##	457	78.78389	100.54167	5.294326	2.7943262	1.32180851	2.2269504	2.24202128
##	366	69.40800	103.33577	5.089970	2.4257426	1.68532071	2.0632802	2.64270340
##	515	69.04338	94.36550	5.088972	2.6954887	0.59523810	1.6031746	1.85338346
##	410	91.15997	134.67161	7.885777	3.6348160	2.07852828	2.6617243	1.64415157
##	426	62.07548	76.91029	5.681015	2.3294064	1.42908926	0.8921613	1.37335750
##	564	71.49640	134.26169	6.291720	2.7786358	0.92621193	2.1265551	1.97983698
##	174	105.84014	184.95782	9.881664	6.5805507	0.40246046	3.8459285	3.23784417
##	596	80.57942	156.91009	7.255046	4.2452599	1.00733945	2.6746177	1.47094801
##	391	93.28112	179.79549	8.919384	4.7178423	1.77059870	2.5856550	1.84291642
##	273	102.87160	190.49318	12.177273	4.5517045	2.21875000	3.2159091	2.73409091
##	206	75.27592	124.39703	5.665063	3.1797114	1.04547442	2.0393529	2.28902492
##	215	107.11621	200.57352	9.565634	5.7273239	1.78028169	3.3430986	3.44619718
##	412	89.91418	149.74746	7.168955	3.9582090	1.82029851	3.0101493	2.43880597
##	360	75.87172	111.10850	5.972985	1.6000000	1.46013072	1.6265795	2.34640523
##	345	104.27032	165.15335	11.353702	2.5763807	1.99706228	3.4905993	3.39189189
##	568	93.24983	136.70171	6.479429	3.9171429	0.32342857	2.5091429	2.89028571
##	603	114.58572	173.33799	6.984195	3.0188450	0.29969605	2.1130699	1.10699088
##	253	71.16577	128.38383	7.079137	2.3453237	1.21794329	2.5412611	2.27465087
##	349	73.42916	125.14871	6.237311	3.4256456	0.91540516	2.3962600	3.80988424
##	593	63.59052	132.03781	5.121313	2.1861238	0.79808891	2.1279601	1.32031575
##	year.bat		long_Tm.bat		Rk.pitch	Age.pitch	W	L
##	617	2020	Baltimore Orioles	406.4232	27.64794	1.1760300	1.4981273	
##	173	2003	Texas Rangers	378.7180	28.65091	3.5396341	4.1981707	
##	240	2006	New York Mets	376.6745	31.14780	5.0566038	2.9323899	
##	168	2003	Pittsburgh Pirates	383.9063	28.93700	3.9224556	4.4523425	
##	36	1998	Los Angeles Dodgers	348.9940	28.25397	4.9543651	4.0317460	
##	234	2006	Detroit Tigers	486.6757	28.82428	6.1322464	4.5597826	
##	129	2002	Chicago Cubs	226.4457	28.80978	4.1358696	5.8731884	
##	29	1998	Chicago Cubs	337.4199	29.10294	5.4869281	4.5522876	
##	657	2021	Los Angeles Dodgers	594.2953	28.79396	4.5380577	2.2913386	
##	166	2003	Oakland Athletics	342.5817	28.56084	7.1863118	4.2547529	
##	472	2015	Baltimore Orioles	404.5919	28.08293	4.6650407	4.0195122	
##	407	2012	San Francisco Giants	366.4564	30.65843	5.3866279	3.8691860	
##	46	1998	Seattle Mariners	386.2968	30.69754	4.6124764	5.8960302	
##	528	2017	Arizona Diamondbacks	359.6622	29.21778	4.6711111	3.3007407	
##	124	2001	Toronto Blue Jays	274.7662	29.24329	5.2733017	4.9763033	
##	592	2019	Cincinnati Reds	471.3486	28.46915	3.7560976	4.7001435	
##	586	2019	Arizona Diamondbacks	394.7497	28.71210	3.8595271	4.0027816	
##	601	2019	Minnesota Twins	545.0277	28.29738	4.8862974	2.8571429	
##	612	2019	Texas Rangers	504.8654	28.12859	3.6111952	3.7760968	
##	61	1999	Los Angeles Dodgers	305.8449	29.16399	4.7522282	5.1782531	
##	216	2005	Oakland Athletics	377.7832	27.95455	5.6695804	4.0944056	
##	462	2014	San Diego Padres	511.6407	28.99533	4.0077760	4.2255054	
##	583	2018	Texas Rangers	394.4356	29.51946	2.7544910	3.6407186	
##	346	2010	New York Mets	384.3583	30.08116	4.5880551	4.4808576	
##	458	2014	New York Yankees	463.2936	29.04239	3.7268446	3.5808477	
##	630	2020	Minnesota Twins	429.5344	29.93130	1.7900763	1.3625954	
##	510	2016	Los Angeles Angels	491.5181	27.85341	2.9521045	3.2656023	
##	613	2019	Toronto Blue Jays	525.6653	27.99203	2.4010624	3.1739708	
##	635	2020	Pittsburgh Pirates	447.9814	27.85502	1.0929368	2.0446097	

## 429	2013	New York Mets	328.0733	30.57902	3.4137931	3.7830460
## 339	2010	Colorado Rockies	207.8459	29.03704	4.5185185	3.8962963
## 354	2010	St. Louis Cardinals	371.8428	30.19773	4.7520259	3.9076175
## 400	2012	Minnesota Twins	340.0030	27.72769	3.3615734	4.1875946
## 141	2002	Oakland Athletics	362.7088	28.57368	7.0771930	3.7368421
## 567	2018	Kansas City Royals	470.2837	27.65736	2.9674419	5.0325581
## 91	2000	Oakland Athletics	384.5941	30.80443	5.7121771	4.1881919
## 251	2006	Washington Nationals	381.9809	28.63918	3.6877761	4.0927835
## 171	2003	Seattle Mariners	404.8996	30.37311	6.2481061	4.7196970
## 347	2010	New York Yankees	398.5135	29.73986	5.3023649	4.0557432
## 319	2009	New York Mets	452.8202	29.73403	3.6136701	5.0579495
## 372	2011	Minnesota Twins	315.5267	27.94346	3.4846527	5.3360258
## 320	2009	New York Yankees	351.7592	28.60514	6.0770465	3.1187801
## 428	2013	Minnesota Twins	397.2095	28.46657	3.7503715	4.2154532
## 566	2018	Houston Astros	598.8824	30.15476	5.5833333	3.5431548
## 359	2011	Arizona Diamondbacks	394.4736	27.55200	4.9344000	3.3680000
## 547	2017	Philadelphia Phillies	496.4760	27.68413	2.8787425	4.3877246
## 159	2003	Houston Astros	436.6491	27.92771	4.9759036	4.2469880
## 77	2000	Baltimore Orioles	438.1989	29.84588	4.7473118	5.0716846
## 108	2001	Detroit Tigers	372.4720	27.87523	3.9349005	5.0018083
## 624	2020	Houston Astros	485.9249	26.58893	1.5494071	1.6600791
## 76	2000	Atlanta Braves	372.2361	30.78996	6.3457249	4.6431227
## 653	2021	Detroit Tigers	521.0271	27.81326	3.8389716	3.8200271
## 117	2001	Philadelphia Phillies	322.9465	29.95276	4.3905512	3.9543307
## 207	2005	Colorado Rockies	304.9501	27.87762	3.0499195	4.6151369
## 460	2014	Philadelphia Phillies	266.1717	28.86677	4.0529695	4.8683788
## 442	2014	Arizona Diamondbacks	450.7169	28.18000	3.3953846	4.7184615
## 370	2011	Los Angeles Dodgers	296.8633	28.40997	4.5096463	3.9694534
## 152	2003	Baltimore Orioles	320.6224	29.43197	3.6615646	4.6020408
## 257	2007	Chicago White Sox	358.3792	27.29760	4.0240000	4.8528000
## 484	2015	Milwaukee Brewers	434.5380	28.31763	3.6246201	3.8480243
## 574	2018	New York Yankees	469.1731	28.59403	5.2283582	3.2985075
## 554	2017	Texas Rangers	292.3211	28.47284	3.7619808	3.6054313
## 392	2012	Cincinnati Reds	283.9097	27.25894	6.6660988	4.4361158
## 192	2004	Philadelphia Phillies	439.8511	31.42633	4.8824451	4.2868339
## 265	2007	Minnesota Twins	403.5200	27.78000	4.8150000	4.4233333
## 275	2007	Texas Rangers	399.5135	28.01272	3.6025437	3.8076312
## 286	2008	Detroit Tigers	406.7824	29.82890	3.9053156	4.3986711
## 134	2002	Houston Astros	378.9455	28.02648	4.7211838	3.8395639
## 69	1999	San Diego Padres	357.1097	29.02124	4.8106195	5.2265487
## 155	2003	Chicago White Sox	388.2983	28.84130	6.2122371	5.1854685
## 7	1997	Colorado Rockies	328.7602	28.73639	4.6241497	3.8962585
## 436	2013	Seattle Mariners	407.7279	27.10328	3.7262295	5.1393443
## 389	2012	Boston Red Sox	284.7757	29.06452	3.2964670	4.3056836
## 490	2015	Pittsburgh Pirates	426.4517	29.47432	5.1737160	2.9728097
## 673	2021	Washington Nationals	580.4555	29.57456	2.8153215	4.2079343
## 88	2000	Minnesota Twins	376.9808	27.44251	4.5261324	6.0243902
## 287	2008	Houston Astros	401.1387	31.04314	5.1926040	4.1278891
## 414	2013	Arizona Diamondbacks	401.2816	28.92743	4.8621190	3.7387518
## 219	2005	San Diego Padres	389.8997	31.73463	4.7055016	4.2346278
## 21	1997	Seattle Mariners	330.6029	29.87004	5.5938628	4.0722022
## 471	2015	Atlanta Braves	425.8242	27.73199	2.6484150	3.4668588
## 513	2016	Milwaukee Brewers	432.5022	28.48296	3.6962963	4.2059259
## 232	2006	Cincinnati Reds	357.7508	30.44357	4.1442006	3.8667712

## 250	2006	Toronto Blue Jays	403.2081	28.50466	4.2111801	3.0093168
## 292	2008	New York Mets	483.4743	29.41307	4.6481224	4.2670376
## 659	2021	Milwaukee Brewers	632.1410	28.53237	5.0633094	3.0589928
## 164	2003	New York Mets	413.6928	31.30366	3.5462478	5.1762653
## 521	2016	San Francisco Giants	480.9701	30.13161	4.0529172	3.7014925
## 244	2006	Pittsburgh Pirates	388.7631	28.30135	4.2323838	5.0284858
## 584	2018	Toronto Blue Jays	439.0306	29.61303	3.1928191	3.5571809
## 79	2000	Chicago Cubs	400.8576	28.59691	3.9296741	5.1166381
## 122	2001	St. Louis Cardinals	394.1223	29.87152	4.9891641	4.3312693
## 652	2021	Colorado Rockies	423.2969	28.70597	3.8565341	4.3664773
## 4	1997	Chicago Cubs	346.8756	28.59701	3.0878939	5.4958541
## 660	2021	Minnesota Twins	502.1447	29.76556	3.2402315	3.3270622
## 644	2021	Arizona Diamondbacks	582.0193	28.69739	1.8376891	3.8569464
## 433	2013	Pittsburgh Pirates	455.8931	28.29984	4.9553429	3.2248804
## 618	2020	Boston Red Sox	423.4623	29.06849	0.8938356	1.4623288
## 600	2019	Milwaukee Brewers	387.5640	29.06267	4.3946667	3.6186667
## 305	2009	Arizona Diamondbacks	482.6744	27.67132	3.8573643	4.4341085
## 236	2006	Kansas City Royals	351.2646	27.28504	2.9984252	4.4771654
## 448	2014	Cincinnati Reds	315.4559	28.22881	3.9084746	4.7491525
## 540	2017	Los Angeles Dodgers	426.6404	29.50287	4.7879656	2.6475645
## 20	1997	San Francisco Giants	337.7387	29.33904	5.5660964	3.8087092
## 325	2009	San Francisco Giants	452.4992	28.90953	5.0710824	4.4361874
## 100	2001	Arizona Diamondbacks	345.4185	29.93139	5.7753002	4.2881647
## 111	2001	Los Angeles Dodgers	328.4368	31.95614	5.5035088	4.7473684
## 637	2020	San Francisco Giants	384.0507	28.44932	1.7263514	1.5472973
## 323	2009	Pittsburgh Pirates	303.5154	26.46353	3.0696921	4.6385737
## 591	2019	Chicago White Sox	411.4118	27.53945	3.5724534	3.8579627
## 223	2005	Texas Rangers	354.3377	30.64286	4.1655844	3.4188312
## 60	1999	Kansas City Royals	463.0156	27.97920	3.6100520	5.0606586
## 507	2016	Detroit Tigers	641.2920	28.68917	4.6656201	4.0596546
## 394	2012	Detroit Tigers	407.1151	29.43643	5.2560137	4.2422680
## 5	1997	Chicago White Sox	233.2618	28.96000	4.3745455	4.3218182
## 537	2017	Houston Astros	408.9134	28.44200	4.5374449	3.1336270
## 59	1999	Houston Astros	388.2854	27.64671	7.3273453	4.6087824
## 514	2016	Minnesota Twins	472.2763	27.88058	2.8215827	4.1237410
## 397	2012	Los Angeles Dodgers	334.0913	28.85329	4.6946108	3.3188623
## 260	2007	Detroit Tigers	400.4248	29.20000	4.3454545	3.7140496
## 201	2005	Atlanta Braves	318.4272	27.92260	4.8839009	4.1377709
## 276	2007	Toronto Blue Jays	332.7320	27.47079	4.8298969	4.3625430
## 664	2021	Philadelphia Phillies	472.6987	28.56041	4.3901019	3.6535662
## 619	2020	Chicago Cubs	490.6411	29.71371	1.7459677	1.2459677
## 534	2017	Cincinnati Reds	486.6261	27.17117	3.2207207	3.7207207
## 417	2013	Boston Red Sox	414.8775	29.99510	4.8513072	3.2549020
## 262	2007	Kansas City Royals	354.4164	27.30492	3.6836066	4.5114754
## 598	2019	Los Angeles Dodgers	438.5134	28.56294	5.3111740	3.0141443
## 255	2007	Boston Red Sox	450.5905	30.83197	4.6933116	3.5807504
## 71	1999	Seattle Mariners	340.5551	27.72835	5.1220472	5.6082677
## 191	2004	Oakland Athletics	363.8941	29.92708	5.7534722	4.9687500
## 182	2004	Colorado Rockies	328.7559	29.58110	3.5842520	5.3212598
## 39	1998	New York Mets	360.0196	31.80214	5.3137255	4.3262032
## 597	2019	Los Angeles Angels	378.0839	27.47403	3.3888149	3.3994674
## 647	2021	Boston Red Sox	683.7972	29.74621	4.8331034	3.4220690
## 383	2011	Texas Rangers	410.9482	30.18307	5.5060449	3.8255613
## 504	2016	Chicago White Sox	468.6065	28.86470	4.2861586	3.9984448

## 183	2004	Detroit Tigers	443.6229	28.80303	4.4848485	5.8232323
## 89	2000	New York Mets	344.4101	31.98429	6.8167539	4.7521815
## 473	2015	Boston Red Sox	531.9184	29.36421	3.2951334	3.9387755
## 90	2000	New York Yankees	373.4678	31.28545	5.8029466	4.5414365
## 424	2013	Kansas City Royals	309.0815	27.57216	5.5636672	5.0186757
## 252	2007	Arizona Diamondbacks	450.0301	27.47227	5.4548336	4.2440571
## 496	2015	Texas Rangers	440.9697	27.13333	4.1909091	3.0787879
## 463	2014	San Francisco Giants	357.0502	31.81162	5.2747253	4.0722135
## 535	2017	Colorado Rockies	458.9930	28.41913	4.1673699	3.6005626
## 199	2004	Toronto Blue Jays	295.2635	28.59459	3.4746622	5.3564189
## 87	2000	Milwaukee Brewers	381.6644	28.42450	4.3120805	4.8338926
## 197	2004	St. Louis Cardinals	382.1030	30.44691	6.4057052	3.4643423
## 291	2008	Minnesota Twins	295.6096	28.09414	4.7253086	4.4305556
## 432	2013	Philadelphia Phillies	331.6576	28.31529	3.4394904	3.7563694
## 336	2010	Chicago Cubs	361.9472	27.33230	4.0667702	4.5465839
## 651	2021	Cleveland Guardians	680.6714	27.21521	4.1736011	4.2740316
## 157	2003	Colorado Rockies	361.7644	28.70997	4.0453172	4.4395770
## 331	2009	Washington Nationals	389.0548	29.02161	2.4668588	4.1152738
## 571	2018	Milwaukee Brewers	434.5125	28.63850	4.6108033	2.9736842
## 74	1999	Toronto Blue Jays	336.2913	28.21521	5.3784787	4.8738404
## 640	2020	Tampa Bay Rays	359.2616	28.16846	2.2329749	1.1720430
## 524	2016	Tampa Bay Rays	392.9954	27.41422	3.6213292	4.9196291
## 72	1999	St. Louis Cardinals	255.3675	28.93171	4.3658537	5.2373984
## 447	2014	Chicago White Sox	426.9902	27.90894	4.0894309	5.1365854
## 670	2021	Tampa Bay Rays	621.1732	29.06926	4.1991342	2.6565657
## 64	1999	New York Mets	332.1578	32.01329	5.8953488	3.9435216
## 363	2011	Chicago Cubs	441.9696	29.05175	4.4368341	5.3378995
## 399	2012	Milwaukee Brewers	417.4110	29.49110	4.3382789	4.8931751
## 115	2001	New York Yankees	413.8107	30.50860	6.9216061	4.1319312
## 650	2021	Cincinnati Reds	509.1336	29.05668	3.3576248	3.4358974
## 493	2015	Seattle Mariners	525.5306	29.16692	3.2697466	3.8435171
## 66	1999	Oakland Athletics	361.5739	31.93310	4.7429577	4.2042254
## 421	2013	Colorado Rockies	281.8767	28.60902	3.9157895	3.9939850
## 148	2002	Texas Rangers	378.2096	29.80123	3.0708783	3.6856703
## 559	2018	Baltimore Orioles	386.3589	26.97699	2.1871166	5.2377301
## 385	2011	Washington Nationals	349.6702	27.07229	4.2605422	3.8509036
## 302	2008	Texas Rangers	420.8352	28.66721	4.0920840	4.0759289
## 437	2013	St. Louis Cardinals	449.1612	26.85736	4.9565891	3.2728682
## 452	2014	Kansas City Royals	297.9625	28.37520	5.6672104	3.9037520
## 290	2008	Milwaukee Brewers	508.9769	31.04283	5.6013180	4.6079077
## 226	2006	Arizona Diamondbacks	397.8555	28.47191	4.1926164	4.1990369
## 621	2020	Cincinnati Reds	365.8684	28.73684	1.8464912	1.5701754
## 53	1999	Boston Red Sox	354.3118	29.89199	5.3066202	3.7752613
## 154	2003	Chicago Cubs	321.7474	30.22165	5.7147766	4.6752577
## 667	2021	San Francisco Giants	566.7884	29.47175	5.1721419	2.3232589
## 301	2008	Tampa Bay Rays	397.3836	29.31639	5.8229508	3.7803279
## 497	2015	Toronto Blue Jays	413.8177	28.09509	4.7575277	4.0174326
## 309	2009	Chicago Cubs	359.5601	27.96724	4.3432137	4.6271451
## 585	2018	Washington Nationals	535.2127	30.06768	3.4558011	3.0814917
## 409	2012	St. Louis Cardinals	451.4281	27.97605	4.6661677	3.8113772
## 373	2011	New York Mets	268.3018	30.40237	4.0650888	4.1730769
## 67	1999	Philadelphia Phillies	365.4925	28.59536	4.0099502	4.1807629
## 614	2019	Washington Nationals	592.9032	30.72254	4.6907514	3.8179191
## 322	2009	Philadelphia Phillies	358.3446	31.41868	4.5732689	4.1175523

## 636	2020	San Diego Padres	471.0755	28.35971	1.9496403	1.0827338
## 202	2005	Baltimore Orioles	361.0157	29.53931	3.9575472	5.0000000
## 582	2018	Tampa Bay Rays	532.9776	27.57203	3.7468531	3.2769231
## 405	2012	Pittsburgh Pirates	405.7163	29.86822	4.1255814	4.0155039
## 218	2005	Pittsburgh Pirates	464.0914	29.80424	3.9102773	6.0065253
## 68	1999	Pittsburgh Pirates	414.7423	27.15358	4.2576792	4.6672355
## 303	2008	Toronto Blue Jays	322.9262	29.16467	5.0325901	4.0600343
## 310	2009	Chicago White Sox	359.0139	30.03813	4.6672444	4.5892548
## 544	2017	New York Mets	483.6178	28.07945	3.0520548	3.4000000
## 238	2006	Milwaukee Brewers	373.5705	29.08829	4.1884550	4.8149406
## 615	2020	Arizona Diamondbacks	389.2000	28.19615	1.1807692	1.7384615
## 181	2004	Cincinnati Reds	453.7360	28.66464	3.9544765	4.5250379
## 562	2018	Chicago White Sox	475.8434	27.81399	2.7650350	4.1440559
## 341	2010	Houston Astros	335.6532	29.67265	4.0642750	4.1121076
## 446	2014	Chicago Cubs	571.7797	27.73963	3.2517883	4.0886981
## 137	2002	Milwaukee Brewers	327.7418	27.81908	3.5526316	5.6217105
## 374	2011	New York Yankees	405.7416	30.17544	5.2551834	3.2169059
## 672	2021	Toronto Blue Jays	619.5888	28.92407	4.0859599	2.6404011
## 23	1997	Texas Rangers	401.9485	29.81618	5.0018382	4.5367647
## 213	2005	Minnesota Twins	401.9821	28.21147	6.5555556	5.5806452
## 443	2014	Atlanta Braves	471.3249	26.69558	4.5567823	4.6876972
## 381	2011	St. Louis Cardinals	393.4984	30.29524	5.2396825	4.0476190
## 212	2005	Milwaukee Brewers	363.2513	28.20826	4.8258528	4.4129264
## 494	2015	St. Louis Cardinals	502.8227	28.74594	5.1846381	3.0206795
## 542	2017	Milwaukee Brewers	423.4452	28.61798	4.0786517	3.8665730
## 280	2008	Baltimore Orioles	329.4334	28.41960	3.2909648	4.3169985
## 431	2013	Oakland Athletics	274.0640	28.61905	5.7044335	3.8686371
## 18	1997	Pittsburgh Pirates	416.1223	25.85644	4.9526917	5.3947798
## 312	2009	Colorado Rockies	302.4613	29.28947	4.6176471	3.4907121
## 278	2008	Arizona Diamondbacks	443.1733	28.36304	4.8811881	4.6320132
## 556	2017	Washington Nationals	464.0277	30.56703	4.5870570	2.9275809
## 180	2004	Chicago White Sox	325.7308	28.93226	4.9483066	4.3600713
## 209	2005	Houston Astros	380.4874	29.95310	5.6700168	4.6231156
## 19	1997	San Diego Padres	275.1310	27.66156	4.6751701	4.9353741
## 177	2004	Baltimore Orioles	352.7085	28.65309	4.5097720	4.7671010
## 150	2003	Arizona Diamondbacks	458.5228	28.41531	5.2100977	4.1368078
## 476	2015	Cincinnati Reds	321.9546	28.30015	3.0922401	3.7569546
## 109	2001	Houston Astros	372.2504	29.07937	5.3174603	4.0476190
## 470	2015	Arizona Diamondbacks	393.6166	27.54635	3.7949438	3.6502809
## 627	2020	Los Angeles Dodgers	386.4239	28.23625	2.2491909	0.9352751
## 93	2000	Pittsburgh Pirates	447.1783	27.90605	4.1910828	4.9012739
## 445	2014	Boston Red Sox	403.7191	30.46107	3.2198473	4.3038168
## 84	2000	Houston Astros	367.4580	29.04545	3.8181818	5.3933566
## 456	2014	Minnesota Twins	386.6263	29.44104	4.0214395	4.5313936
## 382	2011	Tampa Bay Rays	382.9650	28.85000	5.2000000	3.9350000
## 50	1999	Arizona Diamondbacks	336.4044	30.28309	6.5036765	3.7113971
## 416	2013	Baltimore Orioles	419.1449	27.62047	4.4960630	3.9527559
## 92	2000	Philadelphia Phillies	299.2222	29.23958	3.3142361	4.8368056
## 641	2020	Texas Rangers	333.8144	28.00379	1.2424242	1.6590909
## 530	2017	Baltimore Orioles	342.7569	28.32875	4.1360856	4.1314985
## 247	2006	Seattle Mariners	479.6193	27.51269	4.6751269	4.9170897
## 196	2004	Seattle Mariners	416.6632	30.61632	3.4739583	5.0243056
## 314	2009	Houston Astros	382.2018	30.93627	3.7966616	4.2139605
## 665	2021	Pittsburgh Pirates	567.1101	27.57047	2.8456376	3.1798658

## 594	2019	Detroit Tigers	507.7846	27.57588	2.4620596	4.8794038
## 379	2011	San Francisco Giants	404.9533	29.64174	5.1323988	4.1900312
## 272	2007	San Francisco Giants	373.2568	27.91033	3.7857143	4.7583587
## 96	2000	Seattle Mariners	438.9706	29.26422	5.8201835	5.1137615
## 351	2010	San Diego Padres	341.1891	27.26475	5.1891074	3.9576399
## 98	2000	Texas Rangers	419.9879	28.14731	4.5372617	5.4558059
## 264	2007	Milwaukee Brewers	490.4067	29.79205	4.4755352	4.2951070
## 506	2016	Colorado Rockies	379.9122	28.13813	3.4460432	4.0820144
## 47	1998	St. Louis Cardinals	254.1641	28.99831	4.2859560	3.8307953
## 172	2003	St. Louis Cardinals	393.8344	31.54180	4.9935691	4.5530547
## 411	2012	Texas Rangers	422.2678	29.30678	4.9135593	3.4898305
## 151	2003	Atlanta Braves	348.7680	30.86175	5.9523810	3.9109063
## 103	2001	Boston Red Sox	298.9709	30.50427	5.0393162	4.8786325
## 378	2011	San Diego Padres	332.8664	28.14593	3.9615975	4.9953917
## 268	2007	Oakland Athletics	263.1464	27.62336	4.2220395	4.4720395
## 11	1997	Los Angeles Dodgers	353.0226	29.53310	5.5818815	4.8466899
## 45	1998	San Francisco Giants	378.4480	30.97148	6.1778523	4.8020134
## 365	2011	Cincinnati Reds	271.3922	27.77526	4.6742081	4.3393665
## 139	2002	New York Mets	340.7810	30.01471	4.5915033	4.7173203
## 575	2018	Oakland Athletics	513.3824	29.80000	4.6472973	2.2067568
## 671	2021	Texas Rangers	522.5441	27.58296	2.9312407	4.3721973
## 604	2019	Oakland Athletics	561.9182	31.03244	4.5077574	3.3624824
## 187	2004	Milwaukee Brewers	339.6884	27.84418	3.7397260	5.0976027
## 16	1997	Oakland Athletics	408.4455	28.58411	3.5467290	4.9454829
## 565	2018	Detroit Tigers	504.8963	28.02557	3.4176136	4.6534091
## 607	2019	San Diego Padres	712.6667	27.09787	3.3177305	4.3546099
## 413	2012	Washington Nationals	394.8152	27.70186	5.2841615	3.7344720
## 185	2004	Kansas City Royals	288.3590	28.23292	3.1348511	5.2854641
## 477	2015	Colorado Rockies	308.3485	28.97587	2.4088472	3.7412869
## 500	2016	Atlanta Braves	489.9051	27.13503	2.4090909	3.1363636
## 145	2002	San Francisco Giants	466.6408	29.84974	6.8739206	4.2262522
## 337	2010	Chicago White Sox	428.4306	29.49912	5.4112478	4.5922671
## 51	1999	Atlanta Braves	432.5791	28.14029	7.4028777	3.7410072
## 406	2012	San Diego Padres	446.8104	27.61650	2.9884226	3.2040521
## 377	2011	Pittsburgh Pirates	424.2138	28.36146	3.6413502	4.2067511
## 116	2001	Oakland Athletics	374.1557	29.49135	6.4584775	4.1591696
## 113	2001	Minnesota Twins	340.6135	28.42199	5.7659574	4.4556738
## 311	2009	Cincinnati Reds	351.5891	29.79219	3.9687500	4.1546875
## 25	1998	Arizona Diamondbacks	310.8170	27.43774	3.8962264	5.4094340
## 2	1997	Baltimore Orioles	328.3826	30.73310	6.7188612	4.4359431
## 266	2007	New York Mets	448.7050	30.74735	4.9682300	4.1906203
## 560	2018	Boston Red Sox	574.2468	28.91248	5.7474892	2.5738881
## 393	2012	Colorado Rockies	365.7571	28.24559	3.3256445	3.7259159
## 454	2014	Miami Marlins	319.2820	27.13713	4.5208012	4.1479199
## 631	2020	New York Mets	400.1984	29.53696	1.4980545	1.5758755
## 355	2010	Tampa Bay Rays	333.4196	29.55436	5.4318530	4.0122511
## 221	2005	Seattle Mariners	431.1597	31.38151	3.9462185	5.3680672
## 576	2018	Philadelphia Phillies	462.4011	27.15831	3.6715040	3.7664908
## 395	2012	Houston Astros	403.0114	27.31721	2.5163585	4.6529161
## 633	2020	Oakland Athletics	489.5519	30.56846	2.1908714	1.2157676
## 249	2006	Texas Rangers	342.9724	28.78955	3.7619048	3.6451613
## 277	2007	Washington Nationals	329.3867	27.99733	3.7013333	3.5866667
## 529	2017	Atlanta Braves	503.8064	28.85694	3.5794798	3.5303468
## 459	2014	Oakland Athletics	311.8806	28.45274	5.0066335	4.1592040

## 662	2021	New York Yankees	507.9303	29.54451	5.0667656	3.4406528
## 451	2014	Houston Astros	406.1567	28.85667	3.5016667	4.3283333
## 348	2010	Oakland Athletics	301.3778	26.91624	4.4034188	4.5982906
## 526	2016	Toronto Blue Jays	381.8351	29.52080	4.6702619	3.9399076
## 638	2020	Seattle Mariners	415.0723	26.90763	1.0963855	1.3574297
## 35	1998	Kansas City Royals	389.0984	28.58288	4.8342441	5.4499089
## 489	2015	Philadelphia Phillies	352.9504	27.88872	2.8406015	3.9293233
## 654	2021	Houston Astros	685.6217	28.73145	4.4080119	3.3071217
## 229	2006	Boston Red Sox	423.4919	30.72240	4.5422078	3.3490260
## 646	2021	Baltimore Orioles	693.1067	28.23119	2.3474692	4.4719562
## 317	2009	Milwaukee Brewers	436.1810	29.97033	4.4718101	4.3545994
## 425	2013	Los Angeles Dodgers	379.6111	28.00300	5.0555556	3.7237237
## 488	2015	Oakland Athletics	413.8505	28.32974	3.1633282	3.9137134
## 99	2000	Toronto Blue Jays	288.9782	29.07273	5.3509091	4.8545455
## 205	2005	Chicago White Sox	340.0174	29.34146	6.6463415	4.0156794
## 533	2017	Chicago White Sox	445.9589	28.31232	2.5586510	3.5102639
## 81	2000	Cincinnati Reds	420.4982	27.62727	5.6363636	5.2636364
## 1	1997	Atlanta Braves	278.3638	28.15672	6.6902985	4.3339552
## 367	2011	Detroit Tigers	426.0875	27.94854	5.4957118	4.0222985
## 283	2008	Chicago White Sox	372.3371	28.69010	5.1916933	4.1741214
## 13	1997	Minnesota Twins	391.5924	28.49638	4.4873188	5.3768116
## 208	2005	Detroit Tigers	368.8177	28.96252	4.1294719	4.8023850
## 527	2016	Washington Nationals	579.1433	29.65672	4.6014925	3.3253731
## 161	2003	Los Angeles Dodgers	357.5267	31.14333	5.1333333	4.8033333
## 475	2015	Chicago White Sox	504.6892	28.31076	4.7256944	5.2395833
## 512	2016	Miami Marlins	428.0250	28.62917	4.1402778	3.8986111
## 9	1997	Houston Astros	370.6899	27.16473	6.1608527	5.7189922
## 420	2013	Cincinnati Reds	341.5522	27.95185	5.3980738	4.2985554
## 289	2008	Los Angeles Dodgers	366.1637	29.36116	4.8426966	3.9839486
## 195	2004	San Francisco Giants	340.5783	30.62811	5.3704246	4.5915081
## 269	2007	Philadelphia Phillies	319.1697	30.77576	4.3090909	3.3000000
## 335	2010	Boston Red Sox	307.2678	29.47934	4.8462810	4.4016529
## 17	1997	Philadelphia Phillies	315.8476	27.70753	3.6374781	4.9544658
## 297	2008	San Diego Padres	293.2986	29.66769	2.7029096	4.2633997
## 666	2021	San Diego Padres	582.3079	30.26463	4.0776081	3.6857506
## 623	2020	Detroit Tigers	353.4928	26.51449	1.3659420	1.8260870
## 190	2004	New York Yankees	439.2809	32.72241	6.0200669	3.3043478
## 295	2008	Philadelphia Phillies	356.0333	31.33651	5.5761905	4.2730159
## 222	2005	St. Louis Cardinals	402.4599	30.44649	6.1939799	3.9498328
## 501	2016	Baltimore Orioles	375.8017	28.07107	5.4115702	3.6561983
## 464	2014	Seattle Mariners	420.8864	28.73636	4.8439394	4.0969697
## 140	2002	New York Yankees	414.3354	32.05859	7.5858586	3.9454545
## 176	2004	Atlanta Braves	366.5209	29.98760	5.5937984	3.6325581
## 558	2018	Atlanta Braves	551.7343	27.90909	4.1720280	2.9272727
## 546	2017	Oakland Athletics	352.5051	28.96798	3.0756914	3.3551674
## 102	2001	Baltimore Orioles	411.4874	28.10650	3.5162455	5.5216606
## 12	1997	Milwaukee Brewers	342.5625	29.43182	5.1856061	5.6041667
## 430	2013	New York Yankees	437.8729	30.38644	5.2423729	4.2135593
## 350	2010	Pittsburgh Pirates	317.2342	29.48601	2.9440353	4.1354934
## 516	2016	New York Yankees	473.2217	27.94729	3.8108527	3.5209302
## 14	1997	New York Mets	308.4126	29.21004	5.5817844	4.6784387
## 577	2018	Pittsburgh Pirates	567.8580	26.30733	4.3650546	3.8096724
## 403	2012	Oakland Athletics	284.9904	28.10256	4.7019231	2.8397436
## 10	1997	Kansas City Royals	365.8971	28.22744	3.7472924	5.1642599

## 531	2017	Boston Red Sox	471.2629	28.48006	4.8670606	3.0782866
## 342	2010	Kansas City Royals	389.3532	27.55887	3.2189055	4.3764511
## 465	2014	St. Louis Cardinals	453.6770	27.62906	4.9289026	3.9335394
## 210	2005	Kansas City Royals	303.7851	25.18512	3.1107438	5.9884298
## 132	2002	Colorado Rockies	393.9701	29.42216	3.7739521	4.8532934
## 390	2012	Chicago Cubs	352.2656	28.06565	3.0305344	3.9480916
## 228	2006	Baltimore Orioles	309.0852	28.39590	3.7160883	4.7760252
## 271	2007	San Diego Padres	322.0787	30.69136	5.4938272	4.2962963
## 520	2016	San Diego Padres	455.8140	28.15030	3.0803571	3.7738095
## 304	2008	Washington Nationals	352.9602	27.82153	3.3967552	5.1356932
## 133	2002	Detroit Tigers	357.0244	28.22889	2.5778612	4.9624765
## 28	1998	Boston Red Sox	341.1061	30.16162	6.0033670	4.1784512
## 561	2018	Chicago Cubs	486.0315	30.20970	4.5373526	2.9908257
## 200	2005	Arizona Diamondbacks	360.2339	27.46290	4.0080645	4.2612903
## 144	2002	San Diego Padres	342.7585	28.48631	3.0144928	4.2190016
## 274	2007	St. Louis Cardinals	416.2389	30.63127	4.6976401	3.6887906
## 376	2011	Philadelphia Phillies	350.3022	28.71763	6.2374101	3.4658273
## 293	2008	New York Yankees	421.8132	29.68289	4.6514914	3.3924647
## 225	2005	Washington Nationals	257.7199	28.92247	4.7958861	4.3306962
## 444	2014	Baltimore Orioles	394.8456	27.81591	5.3759750	3.4212168
## 332	2010	Arizona Diamondbacks	346.4156	27.96591	2.8912338	5.1298701
## 149	2002	Toronto Blue Jays	315.3692	27.42857	4.0032103	4.3162119
## 628	2020	Miami Marlins	434.0982	29.28727	1.3781818	1.1090909
## 263	2007	Los Angeles Dodgers	367.6992	30.89612	4.9674419	4.0372093
## 384	2011	Toronto Blue Jays	359.3286	29.17925	4.5000000	3.7279874
## 388	2012	Baltimore Orioles	382.4343	28.49235	4.5886850	3.3180428
## 356	2010	Texas Rangers	378.7403	27.89736	5.0031104	3.6796267
## 358	2010	Washington Nationals	300.8369	28.27896	3.9146341	4.4984756
## 130	2002	Chicago White Sox	340.7829	26.77436	5.1931624	4.7726496
## 629	2020	Milwaukee Brewers	476.5502	27.72691	1.7389558	1.4819277
## 481	2015	Los Angeles Angels	585.1029	28.07647	4.6323529	3.8735294
## 83	2000	Detroit Tigers	308.8105	28.97124	5.0693739	5.2385787
## 112	2001	Milwaukee Brewers	323.5146	28.66513	3.4024578	4.7941628
## 386	2012	Arizona Diamondbacks	445.4815	28.49117	4.3756019	4.2552167
## 455	2014	Milwaukee Brewers	443.2031	28.62344	4.6359375	4.2515625
## 211	2005	Los Angeles Dodgers	344.1661	28.60323	4.5306452	5.8645161
## 75	2000	Arizona Diamondbacks	421.1576	31.52717	5.4528986	4.8605072
## 97	2000	St. Louis Cardinals	397.6770	30.03285	5.6861314	4.2062044
## 8	1997	Detroit Tigers	316.5354	27.95164	4.3350604	4.5734024
## 609	2019	Seattle Mariners	445.2300	28.61714	2.7514286	3.6642857
## 491	2015	San Diego Padres	471.8304	29.13422	4.1681416	4.4646018
## 136	2002	Los Angeles Dodgers	312.8855	32.10256	6.0598291	4.3213675
## 328	2009	Tampa Bay Rays	388.8914	30.41369	4.6383929	4.1130952
## 241	2006	New York Yankees	466.5699	32.21966	5.4316436	3.9477727
## 423	2013	Houston Astros	333.8128	27.35632	2.2840722	5.3234811
## 55	1999	Chicago White Sox	367.6550	26.38004	5.0017513	5.0245184
## 581	2018	St. Louis Cardinals	512.4759	27.02476	3.7730399	3.3480055
## 398	2012	Miami Marlins	350.1256	28.79845	3.9596899	4.7441860
## 121	2001	Seattle Mariners	377.9892	31.03617	7.5352622	3.1627486
## 580	2018	Seattle Mariners	463.1688	28.88269	4.0858369	3.4234621
## 434	2013	San Diego Padres	496.9738	28.74462	4.0784615	4.6276923
## 483	2015	Miami Marlins	388.3349	27.35648	3.1419753	4.2345679
## 56	1999	Cincinnati Reds	447.3254	26.91912	6.6250000	4.8841912
## 306	2009	Atlanta Braves	395.8692	28.41385	5.1200000	4.4861538

## 160	2003	Kansas City Royals	301.2021	28.98594	3.7029877	3.8945518
## 569	2018	Los Angeles Dodgers	388.8254	29.08862	3.7539683	3.1759259
## 655	2021	Kansas City Royals	592.8900	28.62535	3.6782730	3.6796657
## 189	2004	New York Mets	400.2673	32.53145	3.5974843	4.9119497
## 261	2007	Houston Astros	442.8809	30.42947	4.2241379	4.7100313
## 52	1999	Baltimore Orioles	366.9748	31.47928	4.4216216	5.0504505
## 329	2009	Texas Rangers	399.7425	28.25251	4.4264214	4.0819398
## 658	2021	Miami Marlins	373.6671	28.57728	3.0726552	4.0039630
## 326	2009	Seattle Mariners	365.8497	27.96503	4.6486014	4.5961538
## 227	2006	Atlanta Braves	495.7281	28.87719	4.1915205	3.6549708
## 509	2016	Kansas City Royals	520.2382	30.14984	4.7902208	4.9716088
## 318	2009	Minnesota Twins	314.4246	28.49922	4.3312597	3.4339036
## 352	2010	San Francisco Giants	408.0392	28.69436	5.3291536	3.9137931
## 579	2018	San Francisco Giants	564.7300	28.87904	3.8551336	4.4388186
## 230	2006	Chicago Cubs	403.1420	28.50710	3.0994318	4.1960227
## 246	2006	San Francisco Giants	387.7362	28.95159	4.2954925	4.6110184
## 563	2018	Cincinnati Reds	465.5453	27.40368	3.4249292	4.1770538
## 31	1998	Cincinnati Reds	425.1250	27.81061	4.8901515	5.2518939
## 126	2002	Atlanta Braves	379.9524	31.53651	6.4206349	3.5984127
## 313	2009	Detroit Tigers	512.1645	27.30233	5.3073090	4.4119601
## 242	2006	Oakland Athletics	358.2921	27.06436	5.5792079	4.1716172
## 120	2001	San Francisco Giants	397.0433	29.55241	5.7171381	4.4143095
## 101	2001	Atlanta Braves	378.0262	30.86911	5.5863874	4.5898778
## 616	2020	Atlanta Braves	476.0417	29.80208	1.8680556	0.9965278
## 419	2013	Chicago White Sox	486.3655	28.15981	3.3655063	5.0648734
## 557	2018	Arizona Diamondbacks	344.6544	29.86395	3.9918367	4.1986395
## 78	2000	Boston Red Sox	334.4583	30.12266	5.1005111	4.2129472
## 217	2005	Philadelphia Phillies	403.3510	30.14570	5.6721854	4.2268212
## 43	1998	Pittsburgh Pirates	385.4283	26.98387	3.9677419	5.6684588
## 632	2020	New York Yankees	330.0855	29.20940	1.8461538	1.4743590
## 284	2008	Cincinnati Reds	264.9970	29.74888	4.3303438	4.5590433
## 552	2017	St. Louis Cardinals	458.5678	28.40819	3.7740113	4.1694915
## 570	2018	Miami Marlins	550.1853	28.13579	2.6110325	4.2885431
## 194	2004	San Diego Padres	458.8865	30.07679	5.3739566	3.8614357
## 661	2021	New York Mets	524.5206	29.39433	4.4000000	3.6056738
## 453	2014	Los Angeles Dodgers	450.2766	29.98784	4.6504559	3.7249240
## 294	2008	Oakland Athletics	295.5698	27.50332	3.8172757	4.0963455
## 156	2003	Cincinnati Reds	459.6609	28.17111	3.5164835	3.6106750
## 362	2011	Boston Red Sox	292.6106	29.64686	4.9471947	4.0346535
## 285	2008	Colorado Rockies	308.4389	29.26584	4.0324575	4.5548686
## 578	2018	San Diego Padres	613.9928	27.91248	3.3629842	3.8608321
## 220	2005	San Francisco Giants	314.5765	30.90936	4.0118871	4.2095097
## 142	2002	Philadelphia Phillies	365.7529	29.77250	4.6006547	4.7103110
## 15	1997	New York Yankees	401.8868	29.17358	6.4283019	4.5924528
## 608	2019	San Francisco Giants	533.7797	28.97997	3.7182911	3.3791722
## 300	2008	St. Louis Cardinals	464.8847	30.94461	4.3727545	4.2380240
## 163	2003	Minnesota Twins	413.4848	29.14260	6.5098039	4.6613191
## 548	2017	Pittsburgh Pirates	562.4458	27.97440	4.1265060	4.7048193
## 634	2020	Philadelphia Phillies	449.6145	29.53414	1.3333333	1.4337349
## 555	2017	Toronto Blue Jays	453.7311	28.47297	3.7527027	3.6824324
## 511	2016	Los Angeles Dodgers	314.7878	29.61198	3.7981771	2.4609375
## 368	2011	Houston Astros	368.9714	26.72331	3.1353383	5.3413534
## 70	1999	San Francisco Giants	388.9134	29.29902	5.0457516	4.6405229
## 239	2006	Minnesota Twins	401.8525	26.96741	5.9656947	3.3704974

## 123	2001	Texas Rangers	408.0857	28.86364	4.4790210	4.8286713
## 333	2010	Atlanta Braves	442.1871	30.02914	5.5797546	3.7914110
## 138	2002	Minnesota Twins	377.1913	29.49161	6.1543624	3.4110738
## 224	2005	Toronto Blue Jays	327.3939	29.03535	4.8030303	5.2542088
## 193	2004	Pittsburgh Pirates	386.2960	28.69600	4.2944000	4.8800000
## 645	2021	Atlanta Braves	702.3760	30.12264	3.7385445	3.4919137
## 649	2021	Chicago White Sox	488.9036	27.75816	4.9821958	3.6958457
## 656	2021	Los Angeles Angels	603.7859	29.55249	3.0469613	3.0897790
## 135	2002	Kansas City Royals	305.3962	28.47170	3.5334477	5.2401372
## 498	2015	Washington Nationals	609.4683	28.89048	4.2222222	4.2079365
## 387	2012	Atlanta Braves	400.5611	28.00322	5.2813505	3.0369775
## 439	2013	Texas Rangers	440.9436	28.77586	5.2084639	3.2711599
## 330	2009	Toronto Blue Jays	327.3509	28.96540	4.1499176	4.9884679
## 599	2019	Miami Marlins	439.7732	27.55492	2.5506419	4.4108417
## 467	2014	Texas Rangers	414.0094	28.26019	2.5658307	4.1363636
## 538	2017	Kansas City Royals	479.9886	30.12857	3.9042857	3.9285714
## 587	2019	Atlanta Braves	642.2958	28.37449	4.4586160	2.4681140
## 175	2004	Arizona Diamondbacks	344.9637	28.75671	2.8530806	5.3491311
## 589	2019	Boston Red Sox	591.8955	28.73048	4.5667506	3.1649874
## 622	2020	Colorado Rockies	263.8635	28.01606	1.6867470	1.9317269
## 518	2016	Philadelphia Phillies	426.6747	26.86357	3.4212894	4.2143928
## 203	2005	Boston Red Sox	361.4172	33.43212	5.7235099	3.7963576
## 179	2004	Chicago Cubs	388.7315	29.63183	5.0032154	3.9630225
## 422	2013	Detroit Tigers	402.1847	28.41525	5.6559322	3.6355932
## 214	2005	New York Mets	309.7310	31.76715	5.0902527	4.8465704
## 605	2019	Philadelphia Phillies	527.2204	28.43802	3.5316804	3.5716253
## 178	2004	Boston Red Sox	377.7679	32.43740	5.8697830	3.8647746
## 344	2010	Milwaukee Brewers	327.7199	29.27093	4.2770167	4.7123288
## 461	2014	Pittsburgh Pirates	500.6694	27.97231	5.2736156	4.0814332
## 440	2013	Toronto Blue Jays	395.3159	30.25116	4.1325116	4.2819723
## 449	2014	Colorado Rockies	302.0494	29.08039	3.3272214	4.4047955
## 606	2019	Pittsburgh Pirates	526.6419	27.55758	3.3146067	3.8047753
## 418	2013	Chicago Cubs	467.8633	28.83103	2.9754224	5.0384025
## 550	2017	San Francisco Giants	464.2199	28.63705	3.3930723	4.8057229
## 62	1999	Milwaukee Brewers	444.5554	28.80619	4.2605863	4.8078176
## 371	2011	Milwaukee Brewers	325.4027	29.76174	5.4781879	4.1963087
## 106	2001	Cincinnati Reds	365.7994	27.90851	4.1428571	4.6388443
## 184	2004	Houston Astros	361.2229	29.35878	5.0824427	3.6290076
## 188	2004	Minnesota Twins	442.1072	28.34673	6.6314908	4.8040201
## 321	2009	Oakland Athletics	344.5369	27.39077	4.0076923	3.8584615
## 539	2017	Los Angeles Angels	474.3801	28.97163	3.7035461	3.8737589
## 186	2004	Los Angeles Dodgers	347.4300	29.70370	5.6247987	3.9066023
## 307	2009	Baltimore Orioles	310.7105	28.56502	3.1826625	4.8034056
## 590	2019	Chicago Cubs	523.7561	30.58401	4.0081301	3.7940379
## 485	2015	Minnesota Twins	439.3504	29.36364	3.9560117	4.3709677
## 573	2018	New York Mets	547.1795	27.88084	3.7269985	3.8838612
## 254	2007	Baltimore Orioles	327.2101	29.62883	3.6641104	4.8251534
## 34	1998	Houston Astros	362.1992	28.06773	6.7330677	4.0896414
## 131	2002	Cincinnati Reds	400.0176	28.62821	4.7644231	4.5416667
## 536	2017	Detroit Tigers	597.8497	28.08631	2.9181548	4.3020833
## 487	2015	New York Yankees	546.4750	27.27618	4.5902883	3.2852807
## 338	2010	Cincinnati Reds	325.3394	28.95777	4.7556561	3.5882353
## 94	2000	San Diego Padres	399.8694	27.88099	4.1867769	4.0628099
## 343	2010	Los Angeles Dodgers	355.4591	28.56132	4.1902516	3.9512579

##	204	2005	Chicago Cubs	465.6607	28.21325	4.8610662	4.2584814
##	104	2001	Chicago Cubs	328.2020	29.68404	5.1889251	4.3811075
##	107	2001	Colorado Rockies	347.8558	28.76019	3.5423197	4.3699060
##	457	2014	New York Mets	373.4147	28.83410	4.4685100	4.6743472
##	366	2011	Colorado Rockies	332.3903	28.36377	3.3593520	3.7113402
##	515	2016	New York Mets	426.1243	28.26571	4.4285714	3.5928571
##	410	2012	Tampa Bay Rays	391.6714	29.33807	5.0331754	3.9936809
##	426	2013	Miami Marlins	407.5150	27.15324	3.4344392	4.7472354
##	564	2018	Colorado Rockies	513.6725	29.08957	5.2687225	4.4038179
##	174	2003	Toronto Blue Jays	403.4711	29.47438	4.7553719	4.4710744
##	596	2019	Kansas City Royals	455.4062	28.12903	2.8211144	4.4560117
##	391	2012	Chicago White Sox	502.0844	28.03662	4.7404459	4.2245223
##	273	2007	Seattle Mariners	454.0874	27.34466	5.2006472	3.6067961
##	206	2005	Cincinnati Reds	400.1101	29.04740	4.3211009	4.4847095
##	215	2005	New York Yankees	416.3879	34.42069	5.0879310	3.2396552
##	412	2012	Toronto Blue Jays	361.4688	29.47032	3.0776256	3.7929985
##	360	2011	Atlanta Braves	446.4018	28.25446	4.7574405	3.9776786
##	345	2010	Minnesota Twins	287.6156	28.78309	5.4338118	3.9202552
##	568	2018	Los Angeles Angels	420.6370	28.10223	3.9082569	3.3722149
##	603	2019	New York Yankees	424.7893	29.57284	5.0693069	3.0155587
##	253	2007	Atlanta Braves	474.0870	29.05217	4.1695652	3.3826087
##	349	2010	Philadelphia Phillies	265.9755	31.28385	5.4763458	3.6492659
##	593	2019	Colorado Rockies	453.7739	28.35372	3.0505319	3.4122340
##	W.L..same_year ERA G.pitch GS GF CG						
##	617	52.66312	4.166667	14.20599	1.910112	3.258427	0.00000000
##	173	39.49140	5.277332	41.78354	5.608232	11.943598	0.217987805
##	240	62.09078	3.519607	45.50314	5.267296	13.566038	0.127358491
##	168	43.72233	5.051583	41.55250	6.844911	11.529887	0.287560582
##	36	55.18448	3.882361	33.86508	7.611111	11.273810	0.605158730
##	234	48.83156	3.724275	43.33696	8.947464	14.963768	0.161231884
##	129	41.10730	4.836830	40.96377	7.653986	14.847826	0.561594203
##	29	51.36246	4.506748	43.39869	8.194444	14.978758	0.351307190
##	657	61.11028	3.116129	37.93701	5.309711	9.053806	0.022309711
##	166	59.95690	3.746844	44.80608	9.049430	15.488593	0.904942966
##	472	56.64561	3.504407	41.69593	7.151220	13.087805	0.000000000
##	407	56.88362	3.461802	47.76744	7.452035	12.300872	0.232558140
##	46	41.58870	5.303270	41.77127	8.939509	14.693762	0.941398866
##	528	60.93598	Inf	43.79111	6.739259	11.488889	0.088888889
##	124	48.67258	3.996351	50.99052	7.206951	14.424961	0.368088468
##	592	48.03929	4.342367	44.28264	6.129125	11.645624	0.000000000
##	586	51.95942	4.251335	45.59805	5.431154	10.414465	0.000000000
##	601	56.34950	Inf	37.67638	6.829446	8.943149	0.046647230
##	612	46.28567	5.300242	33.31770	6.810893	9.524962	0.198184569
##	61	43.45067	4.392602	45.38859	8.331551	14.344029	0.479500891
##	216	59.41678	3.590140	44.31469	8.473776	12.772727	0.472027972
##	462	52.32704	2.968165	44.36547	6.472784	11.505443	0.155520995
##	583	45.70103	4.425464	33.52994	5.252994	9.293413	0.041916168
##	346	43.57979	3.796172	45.67994	7.159265	11.747320	0.352220521
##	458	50.27767	3.667567	40.12716	5.202512	11.023548	0.166405024
##	630	56.79729	3.743855	16.77099	2.335878	3.721374	0.000000000
##	510	54.36819	4.031045	36.78520	4.746009	8.664731	0.142235123
##	613	46.03845	4.614343	36.19788	4.552457	8.896414	0.002656042
##	635	41.38607	4.917361	15.55762	2.204461	3.308550	0.040892193
##	429	45.10146	3.967486	39.46264	5.291667	9.906609	0.163793103

## 339	51.12637	3.963585	45.80889	6.183704	11.198519	0.263703704
## 354	47.05222	3.580940	46.50081	6.868720	13.136143	0.369529984
## 400	48.47766	4.245915	42.37065	5.131619	11.866868	0.083207262
## 141	57.04409	3.926158	47.64211	8.115789	17.345614	0.514035088
## 567	37.40642	5.306217	37.90853	6.857364	9.000000	0.110077519
## 91	52.58843	4.432011	43.80443	7.987085	15.298893	0.357933579
## 251	45.42050	4.826171	41.21797	5.480118	12.496318	0.025036819
## 171	59.96090	3.619716	41.82197	9.943182	13.070076	0.488636364
## 347	55.70328	3.842196	41.85473	7.915541	12.430743	0.170608108
## 319	37.43836	4.204294	52.10847	5.921248	14.897474	0.090638930
## 372	38.21914	4.612682	43.88853	6.852989	12.660743	0.332794830
## 320	63.49824	4.326517	41.03210	7.934189	11.733547	0.162118780
## 428	55.43953	3.935572	50.51263	4.936107	13.725111	0.014858841
## 566	58.26355	3.114256	45.74405	7.373512	11.175595	0.148809524
## 359	54.46416	3.748192	39.27200	7.217600	12.456000	0.264000000
## 547	40.81150	4.224716	38.70359	5.014970	12.227545	0.022455090
## 159	53.21965	3.639081	48.07831	6.496988	14.376506	0.049698795
## 77	51.27398	5.454642	40.59857	8.288530	11.575269	0.802867384
## 108	38.91893	5.097703	38.25497	7.683544	11.989150	0.924050633
## 624	45.51324	4.524941	14.43874	2.490119	3.877470	0.000000000
## 76	54.21433	4.133736	41.50186	10.589219	11.968401	0.806691450
## 653	50.16487	4.480568	40.79702	5.729364	10.148850	0.052774019
## 117	51.86224	4.037024	40.54016	6.401575	12.669291	0.370078740
## 207	43.06768	5.226957	35.94686	6.711755	11.876006	0.093397746
## 460	51.01173	3.703981	43.90851	6.741573	12.768860	0.075441413
## 442	44.69526	4.199815	42.54769	6.164615	11.572308	0.072307692
## 370	49.29352	3.785466	42.95498	7.278135	10.172026	0.331189711
## 152	43.45552	4.559388	45.01020	6.666667	14.367347	0.352040816
## 257	48.91185	5.220720	42.94880	7.640000	12.059200	0.451200000
## 484	54.82116	3.753602	43.96353	5.810030	11.782675	0.031914894
## 574	60.66646	3.548687	42.62985	5.989552	10.467164	0.088059701
## 554	48.84813	4.644792	35.42492	6.253994	10.611821	0.067092652
## 392	60.95586	2.976031	48.86712	8.844974	15.235094	0.494037479
## 192	52.44463	4.097915	47.23197	6.300940	12.504702	0.117554859
## 265	49.98965	3.980067	47.40000	7.286667	14.765000	0.245000000
## 275	57.20702	4.200874	38.11288	5.794913	10.931638	0.000000000
## 286	45.94074	4.792010	34.25914	7.588040	9.817276	0.054817276
## 134	49.92658	4.050498	48.66044	6.088785	14.763240	0.066978193
## 69	43.39762	4.645487	42.02655	8.424779	14.729204	0.277876106
## 155	53.66036	4.304130	42.18929	9.390057	14.829828	0.783938815
## 7	56.77722	5.021990	44.91497	5.894558	14.059524	0.413265306
## 436	32.74095	4.330180	44.60328	6.816393	12.840984	0.177049180
## 389	52.69953	4.288571	38.04147	6.396313	11.105991	0.268817204
## 490	66.71665	2.854955	52.41692	6.640483	14.516616	0.000000000
## 673	35.58873	5.065759	35.62927	5.095759	8.666211	0.025991792
## 88	38.07167	4.702544	50.97909	7.813589	16.353659	0.344947735
## 287	52.95578	4.221171	49.00308	6.822804	15.169492	0.166409861
## 414	55.67661	3.806009	46.46880	5.994194	12.402032	0.232220610
## 219	53.46930	3.770113	43.24272	6.490291	12.977346	0.199029126
## 21	50.69790	5.373231	38.06137	7.315884	13.530686	0.505415162
## 471	45.67507	4.551470	28.18732	5.579251	6.923631	0.128242075
## 513	40.87596	3.922889	40.33630	6.139259	10.382222	0.000000000
## 232	55.61132	4.570235	36.00940	6.413793	10.247649	0.503134796
## 250	61.56009	4.310559	40.25155	6.309006	11.645963	0.263975155

## 292	49.65211	4.218734	53.58414	6.321280	11.273992	0.230876217
## 659	61.10322	3.850317	37.10935	6.248921	8.535252	0.080575540
## 164	31.93006	4.300314	36.76963	7.554974	11.336824	0.167539267
## 521	50.83302	3.759932	47.78697	6.279512	10.601085	0.445047490
## 244	42.78146	4.052639	55.52474	6.080960	14.166417	0.101949025
## 584	51.73634	4.744508	39.41755	4.839096	8.191489	0.000000000
## 79	41.53761	5.302847	39.80617	7.054889	12.641509	0.538593482
## 122	48.61879	3.966192	51.20743	7.452012	14.554180	0.286377709
## 652	50.05153	4.884077	43.71307	6.039773	11.052557	0.136363636
## 4	32.22664	4.475854	47.79270	6.160862	14.890547	0.174129353
## 660	48.73559	4.456729	36.74530	4.138929	9.578871	0.028943560
## 644	29.00686	5.427180	28.90096	5.171939	6.200825	0.0797779917
## 433	58.12147	3.079633	44.62041	5.971292	12.805423	0.130781499
## 618	45.38750	6.003288	14.57534	1.979452	3.243151	0.000000000
## 600	49.92755	4.687000	43.33600	5.676000	9.534667	0.000000000
## 305	44.09550	4.661984	40.55969	7.004651	11.080620	0.195348837
## 236	36.58081	5.680425	40.65984	5.321260	12.631496	0.124409449
## 448	30.37572	4.122915	39.26780	7.233898	11.796610	0.269491525
## 540	60.60783	3.399556	40.32665	5.630372	10.683381	0.074498567
## 20	54.63596	4.550000	52.44946	5.948678	15.678072	0.242612753
## 325	54.17833	3.585315	47.29725	7.471729	13.631664	0.534733441
## 100	53.06588	4.059828	43.89880	7.970840	13.336192	0.634648370
## 111	47.28224	4.483193	42.40000	8.149123	15.226316	0.161403509
## 637	51.48800	4.766993	18.05405	2.334459	3.861486	0.043918919
## 323	39.81691	4.592934	37.18152	6.670989	11.341977	0.209076175
## 591	50.24304	4.550875	42.46915	5.777618	10.371593	0.269727403
## 223	49.84722	5.253799	37.00649	6.410714	12.271104	0.068181818
## 60	36.97345	5.812028	34.95841	7.117851	10.686308	0.601386482
## 507	56.91646	4.423108	43.25432	6.778650	11.962323	0.147566719
## 394	53.45703	3.785790	45.56701	7.494845	15.190722	0.450171821
## 5	52.57475	4.557836	36.38545	7.620000	11.992727	0.296363636
## 537	52.24965	4.400338	40.88546	5.986784	11.155653	0.033773862
## 59	61.39360	3.898044	44.44910	10.732535	15.882236	0.768463074
## 514	41.57105	4.802532	39.42878	5.041727	10.030216	0.139568345
## 397	57.57302	3.304461	42.17665	6.140719	11.845808	0.098802395
## 260	53.40782	4.529620	37.10909	6.578512	11.800000	0.052892562
## 201	51.95893	4.292384	41.89164	7.253870	11.783282	0.339009288
## 276	49.40704	3.654811	46.79038	7.190722	13.721649	0.551546392
## 664	53.53093	4.556274	38.25473	5.935953	8.885007	0.243085881
## 619	49.26040	4.659194	14.46774	2.524194	3.810484	0.092741935
## 534	46.28894	4.863769	39.94895	4.364865	11.564565	0.046546547
## 417	56.41725	3.552696	38.96078	6.867647	10.437908	0.191176471
## 262	43.91541	4.101033	43.97377	7.031148	12.680328	0.100000000
## 598	60.73405	3.677525	42.54173	6.644979	10.632249	0.125884017
## 255	56.95085	3.426069	41.83524	7.241436	12.401305	0.158238173
## 71	43.57457	5.589350	33.13386	9.143701	12.838583	0.456692913
## 191	50.20890	4.081771	46.84028	8.661458	12.626736	0.538194444
## 182	36.01549	5.736268	42.31339	6.450394	12.861417	0.121259843
## 39	52.11335	3.846078	41.56684	7.336898	13.910873	0.409982175
## 597	51.95344	4.734727	42.06525	4.961385	10.612517	0.000000000
## 647	62.17005	4.080000	40.73241	6.809655	9.641379	0.000000000
## 383	50.66911	3.848843	35.89810	8.818653	11.307427	0.561312608
## 504	54.20161	3.950715	41.42302	6.435459	10.771384	0.332814930
## 183	46.27791	Inf	45.54545	8.671717	13.526936	0.390572391

## 89	53.24259	4.360017	51.21291	8.546248	16.778360	0.436300175
## 473	44.48322	4.329168	39.81947	5.959184	10.552590	0.084772370
## 90	51.93511	4.549061	44.77532	8.263352	14.812155	0.451197053
## 424	53.98732	3.001935	45.47199	8.329372	14.558574	0.283531409
## 252	54.51717	4.119244	47.44057	7.527734	13.762282	0.359746434
## 496	53.21648	4.051470	36.08182	5.568182	10.450000	0.154545455
## 463	58.55111	3.263124	48.47881	7.491366	12.701727	0.419152276
## 535	46.53923	4.460534	46.82560	6.208158	11.531646	0.046413502
## 199	35.86969	5.311689	37.50000	6.788851	12.787162	0.298986486
## 87	46.27226	4.297483	44.40604	6.557047	14.595638	0.083892617
## 197	64.21592	3.208669	52.80983	7.697306	16.026941	0.196513471
## 291	50.05748	3.832639	48.69753	7.047840	13.845679	0.195987654
## 432	47.91497	4.312850	32.85987	6.316879	10.383758	0.267515924
## 336	38.85231	4.491351	43.60248	6.982919	14.184783	0.052795031
## 651	51.95491	4.077389	45.10043	5.631277	12.506456	0.000000000
## 157	47.42077	4.798021	49.60121	6.667674	14.283988	0.163141994
## 331	38.51578	5.115418	34.61383	4.461095	8.891931	0.177233429
## 571	57.97035	3.767576	42.27147	5.700831	10.238227	0.000000000
## 74	43.87584	4.903098	39.63822	9.384045	12.541744	0.810760668
## 640	63.34688	3.247921	15.83871	2.333333	3.293907	0.000000000
## 524	42.35874	4.347249	37.55951	6.993818	10.480680	0.044822257
## 72	43.97814	4.828797	45.24715	7.156098	13.663415	0.204878049
## 447	41.09871	Inf	40.85041	6.900813	12.271545	0.130081301
## 670	59.79063	3.328759	29.56277	5.552670	7.109668	0.043290043
## 64	53.62408	3.873787	45.32890	7.079734	13.162791	0.187707641
## 363	44.06248	3.973394	50.93912	6.716895	15.305936	0.164383562
## 399	45.28136	4.450757	49.47478	5.722552	13.839763	0.000000000
## 115	61.22086	3.759694	43.09943	8.309751	15.470363	0.397705545
## 650	48.86612	4.921754	32.11471	6.194332	7.241565	0.037786775
## 493	41.30258	4.277481	36.26080	5.710879	9.864382	0.213114754
## 66	48.36486	4.585158	41.95775	6.582746	12.396127	0.216549296
## 421	49.04422	4.233383	46.23910	5.888722	13.003008	0.030075188
## 148	43.90997	5.189430	31.95532	5.590139	8.437596	0.152542373
## 559	34.43503	5.062975	36.74233	5.980061	10.292945	0.090490798
## 385	57.20768	3.447334	46.82530	5.772590	13.466867	0.112951807
## 302	48.73926	5.334798	39.36511	5.474960	11.129241	0.226171244
## 437	57.62871	3.276372	43.41240	6.979845	10.987597	0.344186047
## 452	58.50759	3.294584	44.81729	7.986949	13.138662	0.156606852
## 290	56.09947	4.080741	44.43657	8.107084	12.807249	0.451400329
## 226	45.34465	4.414013	41.53291	6.874799	11.823435	0.428571429
## 621	52.89203	4.384474	14.07018	2.855263	3.776316	0.149122807
## 53	58.17982	4.203693	39.17770	7.968641	11.573171	0.324041812
## 154	54.37178	3.916134	52.18900	8.487973	15.582474	0.699312715
## 667	67.71609	3.113009	43.92510	5.893561	10.157687	0.081471748
## 301	66.29129	3.657934	44.77049	8.118033	12.247541	0.362295082
## 497	49.08958	3.676561	41.00000	7.232964	11.231379	0.354992076
## 309	46.46729	4.442512	45.57722	7.078003	13.722309	0.177847114
## 585	50.68484	4.100994	35.91160	5.353591	7.932320	0.091160221
## 409	44.35691	3.898653	45.22455	7.052395	12.547904	0.185628743
## 373	51.18506	4.141361	42.90237	7.134615	10.130178	0.255917160
## 67	48.22985	4.931343	37.54063	7.194030	12.358209	0.437810945
## 614	50.99779	Inf	40.00289	6.508671	10.515896	0.047687861
## 322	53.15191	4.116393	43.63446	6.998390	13.772947	0.330112721
## 636	61.86251	4.273633	15.86331	2.388489	3.284173	0.014388489

## 202	38.61403	4.310959	45.46226	6.993711	14.025157	0.089622642
## 582	49.04282	3.935916	40.60000	7.145455	9.923077	0.000000000
## 405	47.30668	Inf	44.11628	6.268217	12.480620	0.094573643
## 218	42.61244	4.257765	51.44372	6.975530	15.536705	0.192495922
## 68	49.96782	4.164130	40.19795	7.996587	12.372014	0.406143345
## 303	41.84015	3.226312	43.81990	7.473413	12.722127	0.746140652
## 310	48.74249	4.212357	41.25997	7.197574	12.435009	0.209705373
## 544	40.22506	4.764877	39.16712	4.817808	8.113699	0.076712329
## 238	44.32566	5.059100	38.26995	7.302207	11.543294	0.404074703
## 615	47.23345	5.556692	15.48462	2.384615	3.426923	0.000000000
## 181	46.93697	5.286100	45.26707	6.417299	12.911988	0.195751138
## 562	40.90853	4.674098	35.74406	6.530070	8.316084	0.000000000
## 341	51.47766	4.346383	44.60538	6.089686	12.230194	0.147982063
## 446	40.93737	3.798398	44.96280	5.074392	11.592275	0.035765379
## 137	39.95446	4.382303	46.84539	7.253289	15.228618	0.353618421
## 374	60.09235	3.243525	41.58692	7.350877	11.007974	0.231259968
## 672	50.07639	3.982206	31.10315	5.828080	8.351003	0.044412607
## 23	52.21765	4.314246	39.17279	7.676471	13.632353	0.474264706
## 213	46.05986	3.415735	53.38710	8.302867	16.783154	0.496415771
## 443	41.27688	3.277413	44.71609	7.850158	12.585174	0.263406940
## 381	45.91718	3.798206	40.57143	8.130159	12.230159	0.365079365
## 212	49.04183	3.851921	35.73968	8.122083	12.949731	0.335727110
## 494	63.78209	Inf	47.67947	6.573117	12.165436	0.048744461
## 542	46.44592	3.947374	45.54494	5.567416	11.667135	0.040730337
## 280	41.90373	4.981577	37.80858	6.212864	10.568147	0.154670750
## 431	58.97457	3.368177	46.88506	7.561576	13.415435	0.298850575
## 18	48.14211	4.274959	43.59706	8.280587	14.102773	0.306688418
## 312	48.81858	4.509845	34.77090	7.911765	10.273994	0.247678019
## 278	47.81897	4.050149	44.95380	7.562706	13.288779	0.321782178
## 556	58.43322	4.446549	37.03082	6.534669	9.542373	0.138674884
## 180	48.38710	4.751622	43.47415	6.909091	13.668449	0.399286988
## 209	42.42343	3.717990	49.02345	8.140704	15.743719	0.331658291
## 19	48.56204	5.160442	39.86735	8.651361	13.617347	0.231292517
## 177	51.22187	4.448811	43.69055	6.710098	13.620521	0.387622150
## 150	51.45812	3.902720	45.49186	6.941368	12.680782	0.311074919
## 476	40.45410	4.176647	42.02489	4.576867	12.278184	0.058565154
## 109	53.85957	4.242046	41.82892	6.805996	14.068783	0.352733686
## 470	46.53701	3.940520	41.99438	5.766854	10.827247	0.061797753
## 627	69.38700	2.962880	18.43042	2.029126	3.957929	0.000000000
## 93	46.21485	5.024968	43.46497	7.105096	13.780255	0.275477707
## 445	40.80926	3.523160	45.40305	4.792366	13.387786	0.117557252
## 84	41.81533	5.408479	36.76573	8.218531	11.089161	0.349650350
## 456	46.64289	4.209632	45.62175	6.104135	13.041348	0.090352221
## 382	53.27500	3.744217	44.77000	7.666667	12.368333	0.788333333
## 50	60.79464	3.745956	37.50735	9.227941	10.781250	1.003676471
## 416	55.80604	3.978961	46.11181	5.875591	14.688189	0.075590551
## 92	35.63877	5.271719	34.03472	6.024306	11.652778	0.256944444
## 641	42.21724	5.197197	14.38636	2.522727	3.416667	0.094696970
## 530	55.24175	4.336743	43.04587	6.928135	11.261468	0.042813456
## 247	50.50970	4.275567	41.84264	8.323181	12.758037	0.311336717
## 196	41.57837	4.809062	38.79861	7.319444	11.579861	0.298611111
## 314	47.48741	4.172155	44.25645	6.300455	12.003035	0.230652504
## 665	49.83657	4.776953	36.69396	4.010738	8.397315	0.000000000
## 594	34.53226	5.087304	37.70461	5.577236	8.397019	0.000000000

## 379	56.47570	3.117305	50.17445	7.246106	13.990654	0.149532710
## 272	42.74817	4.258511	43.69301	7.013678	11.480243	0.183890578
## 96	55.61244	4.393358	47.79633	8.482569	16.273394	0.207339450
## 351	63.66470	3.017746	51.01513	7.214826	13.217852	0.096822995
## 98	44.20544	5.498960	48.49393	7.618718	16.187175	0.169844021
## 264	44.92052	4.237676	47.62691	7.429664	12.730887	0.125382263
## 506	45.59122	5.098288	38.62878	6.100719	9.838849	0.087769784
## 47	52.62512	4.426430	41.58883	7.043993	11.671743	0.197969543
## 172	45.39177	4.916334	41.64309	8.278135	10.953376	0.448553055
## 411	58.45954	3.718797	41.44068	6.789831	12.998305	0.284745763
## 151	51.42183	3.880292	49.31644	8.015361	12.317972	0.199692780
## 103	49.19258	4.220530	40.07692	7.482051	12.709402	0.143589744
## 378	45.61981	3.233118	44.51152	6.895545	12.738863	0.000000000
## 268	44.95561	4.640280	37.92434	8.151316	11.409539	0.223684211
## 11	53.37815	3.651394	49.54355	8.426829	15.632404	0.297909408
## 45	58.61992	3.607668	49.06040	8.506711	15.619128	0.318791946
## 365	51.85021	3.756154	50.11312	6.022624	14.331825	0.156862745
## 139	52.53973	3.482974	43.59150	7.044118	12.227124	0.411764706
## 575	63.12664	3.701041	40.07297	3.890541	10.875676	0.066216216
## 671	38.64609	4.479537	34.72795	5.946188	9.146487	0.000000000
## 604	54.08318	3.952398	48.52045	5.334274	12.301834	0.046544429
## 187	38.30895	4.259692	42.77055	7.508562	13.794521	0.333904110
## 16	46.02635	5.286667	45.44237	5.950156	13.188474	0.105919003
## 565	44.65361	4.667145	44.03125	5.642045	11.987216	0.000000000
## 607	37.52077	4.737702	36.82979	5.988652	9.574468	0.000000000
## 413	53.96144	3.339658	47.30124	7.476708	13.088509	0.147515528
## 185	35.84363	4.877180	33.07356	7.478109	9.500876	0.329246935
## 477	35.64696	4.999048	38.41019	4.474531	9.359249	0.120643432
## 500	55.19497	4.236070	35.09893	4.320856	8.731283	0.040106952
## 145	67.63425	3.261554	48.97582	8.794473	15.649396	0.554404145
## 337	50.87094	3.818612	43.18629	7.841828	13.608084	0.314586995
## 51	63.91970	3.688831	47.14388	8.615108	15.235612	0.534172662
## 406	53.66228	3.589378	40.54269	5.020260	9.865412	0.150506512
## 377	43.79370	3.935823	46.66245	5.860759	12.606188	0.198312236
## 116	56.97745	3.466522	47.40484	8.745675	13.749135	0.766435986
## 113	53.83792	4.697908	44.11702	7.501773	14.370567	0.716312057
## 311	54.44391	3.752891	47.38125	6.062500	13.565625	0.253125000
## 25	40.78098	5.068906	33.11321	8.501887	11.958491	0.396226415
## 2	54.43817	3.563256	48.04626	8.411032	14.971530	0.476868327
## 266	48.70730	4.121589	52.69138	6.842663	15.063540	0.099848714
## 560	69.91142	3.802769	43.83214	6.769010	10.847920	0.090387374
## 393	46.85256	4.841791	46.60380	4.051560	11.476255	0.000000000
## 454	47.19489	3.516918	43.20955	6.349769	12.406780	0.138674884
## 631	53.42185	4.928988	15.44358	2.455253	3.957198	0.000000000
## 355	56.23100	3.421669	52.13629	7.787136	13.410413	0.295558959
## 221	37.32420	4.048403	43.97815	7.342857	13.605042	0.297478992
## 576	44.68296	4.220831	43.35620	6.162269	9.244063	0.000000000
## 395	28.86989	4.515505	42.69844	5.411095	10.697013	0.103840683
## 633	65.31345	3.139046	18.00415	2.564315	4.946058	0.020746888
## 249	44.13659	4.133779	40.00461	5.850998	11.728111	0.127496160
## 277	48.41910	4.313973	49.66133	4.393333	14.318667	0.000000000
## 529	57.12730	4.551575	41.18786	5.596821	10.764451	0.000000000
## 459	52.49700	3.033715	47.02653	6.356551	13.077944	0.286898839
## 662	57.70098	3.729926	37.63798	5.876855	10.121662	0.112759644

## 451	45.02579	4.536600	33.33000	6.700000	9.686667	0.338333333
## 348	48.11676	3.668188	42.25128	7.138462	11.353846	0.364102564
## 526	47.84878	3.996857	38.12481	7.311248	11.650231	0.000000000
## 638	37.03732	5.899518	11.09639	2.192771	2.610442	0.044176707
## 35	49.56449	5.096157	43.69945	8.879781	14.593807	0.373406193
## 489	45.88423	4.202361	42.05564	4.470677	11.518797	0.030075188
## 654	54.99240	4.067671	38.01187	6.396142	9.590504	0.077151335
## 229	61.29303	4.611591	38.89286	5.985390	12.522727	0.134740260
## 646	37.70691	5.766813	35.16142	4.831737	8.146375	0.035567715
## 317	56.43123	4.335653	46.32938	7.146884	11.906528	0.044510386
## 425	55.91899	3.381907	48.20120	5.663664	12.530030	0.292792793
## 488	43.22055	4.605824	35.83205	5.718028	8.790447	0.200308166
## 99	51.01857	5.204782	44.53455	8.187273	14.965455	0.956363636
## 205	60.08558	3.407718	49.25436	8.491289	13.547038	0.510452962
## 533	50.80316	4.519692	32.43695	5.127566	8.162757	0.000000000
## 81	51.12708	4.165491	44.28364	8.585455	14.769091	0.394545455
## 1	56.17408	3.368470	43.10821	9.195896	13.559701	1.326492537
## 367	51.17182	4.070429	40.48199	8.617496	14.228130	0.233276158
## 283	59.06482	4.173003	44.84665	7.932907	11.455272	0.191693291
## 13	39.50595	4.980344	46.42029	7.717391	15.273551	0.500000000
## 208	48.15534	4.054140	38.74446	7.764906	10.054514	0.362862010
## 527	51.22126	3.376985	41.81194	6.619403	10.585075	0.050746269
## 161	47.85616	2.801350	58.29000	7.275000	18.046667	0.145000000
## 475	51.19661	3.799983	43.07292	8.000000	13.173611	0.369791667
## 512	46.75621	3.802472	42.62778	5.683333	10.695833	0.000000000
## 9	49.06650	3.708314	42.84496	10.133721	13.974806	1.054263566
## 420	51.94623	3.220995	47.85393	7.383628	14.977528	0.256821830
## 289	56.77494	3.562632	43.90209	7.333868	12.404494	0.221508828
## 195	54.58159	4.647174	54.41728	7.051245	13.695461	0.327964861
## 269	54.60866	4.720500	37.07273	5.989394	9.942424	0.183333333
## 335	46.22663	4.273207	41.75041	7.685950	12.066116	0.152066116
## 17	41.11144	5.084694	39.66200	6.551664	14.180385	0.672504378
## 297	33.09169	4.545222	38.23124	4.993874	9.398162	0.094946401
## 666	54.38041	3.901196	46.53690	5.613232	10.248092	0.081424936
## 623	44.46330	5.439601	18.17391	2.043478	4.289855	0.043478261
## 190	62.28544	4.594231	47.52174	6.257525	15.483278	0.045150502
## 295	62.40133	3.392762	53.55238	7.314286	15.923810	0.200000000
## 222	59.45903	3.325686	50.21739	8.677258	13.667224	0.816053512
## 501	60.92735	3.657934	39.30083	7.185124	12.542149	0.047933884
## 464	51.76998	3.037470	50.71818	6.786364	14.950000	0.056060606
## 140	61.88605	3.790566	47.57778	8.616162	16.327273	0.456565657
## 176	52.36865	3.572372	50.92558	7.179845	13.623256	0.165891473
## 558	57.01180	Inf	41.58462	5.514685	9.356643	0.086713287
## 546	48.13758	4.501470	38.26346	4.359534	9.353712	0.010189229
## 102	38.53122	4.704152	37.64982	7.980144	11.902527	0.501805054
## 12	51.23394	3.836345	43.70455	8.208333	17.532197	0.318181818
## 430	58.34913	3.792644	44.50169	7.876271	13.057627	0.330508475
## 350	46.52876	4.696200	38.18999	5.633284	10.418262	0.047128130
## 516	58.16312	4.069426	32.92248	6.542636	8.460465	0.000000000
## 14	50.24624	4.008048	37.25279	7.875465	13.325279	0.366171004
## 577	50.18195	4.012090	44.50390	6.368175	13.209048	0.148205928
## 403	65.64989	3.226522	41.35577	5.810897	12.267628	0.049679487
## 10	41.54394	4.694007	32.35018	8.619134	10.106498	0.629963899
## 531	61.57077	3.443530	43.75037	6.293944	11.849335	0.178729690

## 342	42.81554	4.788856	36.39967	6.966833	12.077944	0.334991708
## 465	55.37405	3.770031	48.07264	6.537867	13.751159	0.398763524
## 210	35.06843	5.200149	41.54545	7.160331	12.808264	0.196694215
## 132	43.27087	5.284237	45.79641	6.791916	13.832335	0.052395210
## 390	41.31537	4.858916	40.13588	4.903817	12.196947	0.042748092
## 228	38.48567	5.433013	39.29338	7.509464	11.175079	0.223974763
## 271	58.17919	3.347423	50.00309	6.907407	13.776235	0.052469136
## 520	52.79787	4.075625	43.57440	4.275298	11.549107	0.052083333
## 304	41.09033	4.525560	45.65192	6.156342	12.705015	0.092920354
## 133	34.61245	Inf	34.45591	6.476548	12.242026	0.470919325
## 28	54.23994	4.234125	42.96633	8.744108	14.144781	0.287878788
## 561	61.17946	3.606972	42.49934	6.043250	7.990826	0.015727392
## 200	44.31630	5.411419	36.50645	6.941935	10.424194	0.280645161
## 144	41.43424	4.594444	30.85507	5.669887	10.000000	0.267310789
## 274	64.74531	4.255501	47.00000	6.668142	11.977876	0.079646018
## 376	58.30365	3.202986	38.42806	8.438849	11.598921	1.023381295
## 293	56.89584	4.031146	36.47881	6.302983	11.627943	0.023547881
## 225	51.66898	3.846978	47.28481	6.962025	15.462025	0.208860759
## 444	57.86120	3.273853	45.73323	7.160686	13.516381	0.126365055
## 332	37.96818	5.328442	38.72403	5.913961	12.178571	0.089285714
## 149	40.18853	4.733034	41.04815	6.568218	13.905297	0.250401284
## 628	58.31937	4.910909	13.70545	1.516364	3.501818	0.025454545
## 263	52.37725	3.994620	50.59070	7.173643	13.262016	0.220155039
## 384	55.27214	4.237138	39.36164	6.172956	11.297170	0.295597484
## 388	65.51657	3.421300	46.16820	5.844037	13.814985	0.030581040
## 356	58.17179	3.592022	44.11664	6.662519	12.989114	0.286158631
## 358	47.71034	3.708689	44.44817	5.271341	12.089939	0.100609756
## 130	53.88889	4.146838	46.02222	8.926496	14.124786	0.403418803
## 629	58.19903	4.391606	14.99197	2.875502	3.502008	0.052208835
## 481	60.23664	3.956088	48.36176	6.172059	13.036765	0.085294118
## 83	51.23533	4.715139	45.72420	8.764805	14.357022	0.291032149
## 112	39.16462	4.015714	48.31490	6.049155	14.428571	0.138248848
## 386	50.32537	3.892311	45.58427	6.897271	13.532905	0.189406100
## 455	48.97479	3.611281	47.37188	7.418750	13.001563	0.139062500
## 211	43.16225	4.544968	46.51290	7.567742	14.174194	0.324193548
## 75	50.85691	4.323098	45.84420	8.086957	13.793478	0.833333333
## 97	54.52884	4.686199	35.19708	9.184307	12.678832	0.600364964
## 8	44.20565	4.809706	48.44732	7.081174	15.742660	0.585492228
## 609	41.07758	5.036129	26.41714	5.738571	5.780000	0.108571429
## 491	44.65127	4.055841	41.48083	7.030973	11.383481	0.048672566
## 136	56.18804	3.603658	50.34017	8.605128	16.309402	0.218803419
## 328	57.56979	4.127604	46.56548	6.553571	12.257440	0.101190476
## 241	51.41789	4.387619	48.05684	6.827957	13.276498	0.254992320
## 423	26.52061	4.639524	32.07061	6.893268	8.932677	0.042692939
## 55	50.87222	4.753415	46.47461	8.234676	15.635727	0.327495622
## 581	49.26181	4.369065	37.30261	5.925722	10.233838	0.044016506
## 398	43.36630	4.102713	45.89922	6.776744	13.883721	0.246511628
## 121	63.46221	3.337251	49.21338	8.848101	16.714286	0.479204340
## 580	54.26644	3.961416	39.16595	6.482117	10.871245	0.121602289
## 434	48.33723	3.551123	42.19692	6.163077	11.646154	0.149230769
## 483	45.41778	3.796250	39.06173	5.288580	11.699074	0.000000000
## 56	55.70649	3.837537	51.16544	7.568015	18.498162	0.284926471
## 306	50.16531	3.686246	54.44000	7.390769	14.040000	0.147692308
## 160	46.99417	5.307979	36.39543	5.841828	12.210896	0.175746924

## 569	52.53088	3.705899	38.64021	6.130952	9.732804	0.000000000
## 655	50.91741	4.442841	42.42061	5.274373	11.033426	0.037604457
## 189	44.33719	4.075236	43.00629	6.500000	13.270440	0.069182390
## 261	49.55584	4.666755	48.62382	6.995298	13.285266	0.100313480
## 52	38.01671	5.015387	36.72613	8.172973	11.390991	0.974774775
## 329	49.10491	4.145234	39.59532	6.801003	11.714047	0.307692308
## 658	49.67266	3.957398	41.79524	4.603699	9.401585	0.043593131
## 326	46.50927	3.907185	43.26224	6.236014	14.662587	0.215034965
## 227	47.97899	4.562588	43.28947	6.469298	10.149123	0.276315789
## 509	53.55046	3.888502	43.03470	8.432177	11.589905	0.167192429
## 318	55.79417	4.071369	44.15397	6.270607	13.418351	0.205287714
## 352	64.07710	3.132085	44.14420	7.669279	13.330721	0.311912226
## 579	47.67377	3.778748	45.41069	6.056259	10.561181	0.039381153
## 230	43.43849	4.415440	52.89205	4.714489	15.237216	0.048295455
## 246	47.44759	4.948748	36.62270	8.470785	9.504174	0.368948247
## 563	45.81103	Inf	43.29462	5.910765	11.526912	0.028328612
## 31	47.42392	4.565076	41.62121	8.013258	14.560606	0.316287879
## 126	64.19607	2.889810	51.90159	8.261905	15.255556	0.169841270
## 313	45.48281	4.273173	44.88372	7.697674	14.619601	0.229235880
## 242	59.42297	3.883993	44.19472	8.252475	13.369637	0.250825083
## 120	56.19626	3.991331	50.29451	7.808652	15.983361	0.168053245
## 101	51.19285	3.653647	40.76614	8.996510	10.832461	0.298429319
## 616	64.35619	3.812569	16.72917	1.631944	3.961806	0.000000000
## 419	37.39634	3.874019	43.82278	6.617089	12.419304	0.210443038
## 557	43.52105	3.795946	46.45850	5.955102	10.236735	0.066666667
## 78	53.46153	4.243748	42.10733	7.425894	13.872232	0.345826235
## 217	56.71391	4.178725	48.55960	7.675497	14.899007	0.221854305
## 43	35.11122	3.759032	39.89606	8.648746	12.931900	0.383512545
## 632	55.29715	4.528162	13.87179	2.397436	3.465812	0.102564103
## 284	52.73404	4.203064	50.27055	6.701046	14.849028	0.095665172
## 552	43.78106	3.949718	44.36441	6.237288	10.498588	0.132768362
## 570	39.78606	4.915898	38.97171	5.159830	9.338048	0.043847242
## 194	50.73774	4.067629	41.54090	7.535893	11.502504	0.151919866
## 661	54.09995	Inf	42.52340	4.970213	10.977305	0.046808511
## 453	48.08583	3.575289	44.87842	6.525836	12.452888	0.276595745
## 294	53.40614	3.813571	38.60133	5.901993	10.818937	0.191029900
## 156	50.70073	4.452684	36.48823	5.434851	10.825746	0.130298273
## 362	54.81216	4.136139	39.89439	6.896040	12.287129	0.103960396
## 285	43.64975	4.488640	44.87017	6.191654	12.905719	0.151468315
## 578	42.43480	3.973042	37.32999	5.319943	9.024390	0.000000000
## 220	52.76956	4.183343	43.78752	6.337296	10.974740	0.157503715
## 142	50.62996	4.272766	43.31424	7.603928	13.918167	0.224222586
## 15	54.37486	3.590321	46.32075	9.167925	15.647170	0.679245283
## 608	55.08801	4.011829	36.47130	5.797063	8.866489	0.041388518
## 300	49.70922	4.184027	47.29341	6.744012	11.401198	0.079341317
## 163	60.69513	4.210695	47.48841	9.379679	14.593583	0.390374332
## 548	46.15126	3.886988	42.03313	7.003012	11.650602	0.093373494
## 634	42.12166	6.433253	12.77510	2.365462	3.088353	0.140562249
## 555	55.21736	4.422108	43.42162	5.631081	10.122973	0.089189189
## 511	58.25955	3.548646	45.95312	4.170573	11.917969	0.082031250
## 368	34.14422	4.446436	42.59098	6.861654	11.565414	0.102255639
## 70	59.11668	4.416618	49.82353	7.415033	15.388889	0.315359477
## 239	73.05970	3.328388	48.38937	7.530017	16.121784	0.058319039
## 123	41.99309	5.399510	40.41958	7.335664	13.375874	0.220279720

## 333	59.48253	3.106380	50.14724	7.061350	13.579755	0.104294479
## 138	57.62862	3.844279	48.23826	7.199664	14.942953	0.360738255
## 224	43.85870	3.904747	51.91246	7.473064	16.565657	0.355218855
## 193	45.06596	3.952432	48.02080	6.414400	14.910400	0.116800000
## 645	48.43062	3.950404	43.18598	5.132075	10.902965	0.075471698
## 649	51.84384	Inf	41.37389	6.983680	11.781899	0.170623145
## 656	42.53197	4.899144	36.57735	4.194751	9.845304	0.031767956
## 135	37.58300	5.123774	35.04117	7.468268	10.751286	0.668953688
## 498	50.63431	3.629460	39.44762	7.520635	10.514286	0.209523810
## 387	67.58351	2.930305	46.75241	6.485531	13.570740	0.244372990
## 439	60.72340	3.189248	44.82759	6.003135	12.647335	0.155172414
## 330	40.02257	4.344926	43.25041	6.719934	12.031301	0.518945634
## 599	42.70939	4.848588	37.08274	5.288160	8.934379	0.091298146
## 467	42.23803	4.115831	32.64263	5.293103	8.249216	0.184952978
## 538	54.17223	4.383857	43.39143	5.965714	10.372857	0.045714286
## 587	60.77263	4.372022	35.52103	5.868385	8.698779	0.044776119
## 175	29.57117	5.203017	38.96840	7.357030	9.968404	0.276461295
## 589	49.58220	4.526222	44.89421	5.536524	9.350126	0.031486146
## 622	45.31240	6.589679	16.63052	2.662651	4.148594	0.048192771
## 518	46.36260	5.184348	40.90405	5.760120	12.004498	0.116941529
## 203	58.93961	Inf	40.52980	8.135762	11.074503	0.316225166
## 179	57.48017	4.010852	45.20900	7.226688	13.266881	0.155948553
## 422	47.13822	3.983339	39.17627	8.625424	11.071186	0.159322034
## 214	50.33977	4.192040	37.51986	8.263538	12.972924	0.463898917
## 605	53.35257	4.408264	35.16804	5.961433	8.838843	0.129476584
## 178	57.53775	4.052571	43.22371	8.542571	12.726210	0.215358932
## 344	48.75964	4.684718	39.66667	7.826484	10.286149	0.146118721
## 461	52.64978	3.335375	45.64169	6.410423	12.420195	0.081433225
## 440	50.25800	3.700632	39.30200	6.389831	10.758089	0.208012327
## 449	43.24830	4.951537	45.63752	5.324401	11.644570	0.028208745
## 606	46.49770	4.940927	39.09270	4.952247	8.945225	0.009831461
## 418	38.50914	4.068556	37.91244	6.734255	10.545315	0.124423963
## 550	45.27982	4.344789	41.46988	6.772590	10.349398	0.125000000
## 62	46.96154	4.999658	44.10749	6.982085	13.640065	0.100977199
## 371	51.57988	3.502584	41.04362	8.711409	13.570470	0.055369128
## 106	45.52041	4.378652	40.49278	6.603531	12.268058	0.086677368
## 184	58.14090	4.177954	44.51450	6.366412	12.056489	0.109923664
## 188	54.05298	4.014439	50.72864	8.887772	15.611390	0.227805695
## 321	44.64464	3.918908	43.90769	5.509231	12.567692	0.055384615
## 539	51.48561	3.927986	42.83546	5.570213	10.655319	0.046808511
## 186	56.32875	3.611594	44.44283	7.933977	14.268921	0.099838969
## 307	36.06734	5.121455	38.89164	5.566563	11.136223	0.080495356
## 590	51.96361	4.136206	39.02710	6.500000	8.626016	0.040650407
## 485	48.30170	3.984516	40.97947	6.479472	10.359238	0.086510264
## 573	43.76171	4.775279	36.95475	6.598793	9.140271	0.123680241
## 254	41.20950	5.421610	42.44785	6.542945	10.906442	0.148773006
## 34	59.56387	3.492689	38.74104	9.262948	14.161355	0.619521912
## 131	50.09670	4.114407	44.26282	7.266026	13.451923	0.075320513
## 536	37.18222	5.662426	37.76190	6.052083	9.678571	0.075892857
## 487	52.79339	3.804628	40.76328	6.312595	10.245827	0.121396055
## 338	55.06691	3.827345	45.66063	5.906486	13.808446	0.174962293
## 94	49.10722	4.446694	37.61488	5.715702	12.471074	0.183471074
## 343	54.54807	4.431447	41.20755	6.566038	11.591195	0.143081761
## 204	47.31262	4.284039	42.57027	8.103393	11.504039	0.428109855

## 104	50.53130	4.030489	46.57329	7.890879	13.864821	0.426710098	
## 107	44.83859	5.026944	41.80564	6.133229	11.130094	0.271159875	
## 457	48.92857	3.403733	43.36559	7.301075	11.907834	0.049155146	
## 366	48.75408	4.013844	45.36819	4.944035	11.637703	0.167893962	
## 515	54.02974	3.610843	48.21714	5.851429	13.817143	0.034285714	
## 410	60.06034	2.964992	51.99842	7.276461	14.734597	0.327014218	
## 426	39.78567	3.547757	47.65403	5.203791	14.666667	0.058451817	
## 564	52.19940	4.607254	46.62996	7.353891	12.812041	0.000000000	
## 174	42.10697	4.702727	43.63471	8.218182	12.155372	0.778512397	
## 596	42.89482	5.227669	37.56891	6.236070	10.243402	0.045454545	
## 391	50.43379	3.804952	41.87261	6.689490	11.539809	0.292993631	
## 273	65.80413	4.283269	44.40777	7.110032	13.572816	0.254045307	
## 206	55.82668	5.011437	44.17431	7.226300	12.460245	0.094801223	
## 215	60.79928	4.630362	40.90000	6.132759	14.160345	0.393103448	
## 412	46.20879	4.640320	34.10198	6.094368	9.407915	0.191780822	
## 360	52.52562	3.147574	51.56548	6.208333	14.419643	0.117559524	
## 345	56.73015	3.656443	45.14354	8.149920	11.642743	0.486443381	
## 568	49.48510	4.081009	44.42071	4.404980	9.212320	0.039318480	
## 603	63.38766	4.007171	44.40311	6.910891	10.263083	0.045261669	
## 253	55.92079	3.752536	44.28406	5.875362	11.355072	0.049275362	
## 349	63.82174	3.974127	45.77325	7.442088	12.376835	0.675367047	
## 593	43.26720	5.531822	39.06649	4.640957	9.827128	0.037234043	
##	SHO	SV	IP	H.pitch	R.pitch	ER	HR.pitch
## 617	0.000000000	0.6928839	22.11498	20.32210	11.573034	9.925094	3.172285
## 173	0.111280488	3.3673780	71.68994	78.00762	43.888720	40.527439	8.690549
## 240	0.048742138	4.6509434	74.83176	68.96069	32.281447	29.509434	7.545597
## 168	0.114701131	3.2310178	76.71470	79.53473	41.471729	39.022617	9.135703
## 36	0.253968254	4.0456349	78.08988	73.10516	35.069444	31.420635	6.916667
## 234	0.054347826	5.1032609	93.92917	89.29529	42.349638	38.570652	9.835145
## 129	0.175724638	2.6992754	85.48514	79.69746	42.608696	38.525362	9.063406
## 29	0.243464052	7.2500000	88.11863	89.98039	44.923203	40.928105	9.982026
## 657	0.000000000	4.5866142	59.53635	43.69160	21.594488	18.727034	5.782152
## 166	0.294676806	6.3384030	97.09011	85.75665	40.336502	36.298479	9.382129
## 472	0.000000000	4.5105691	78.26634	72.67642	33.821138	31.526829	8.645528
## 407	0.186046512	5.3255814	78.78837	71.93023	33.507267	30.280523	7.402616
## 46	0.279773157	3.8090737	93.44783	100.46314	55.869565	51.529301	12.086957
## 528	0.041481481	3.7111111	73.68948	66.82519	32.931852	29.437037	8.441481
## 124	0.284360190	4.3285940	86.90742	87.43760	42.097946	39.222749	9.289100
## 592	0.000000000	4.2869440	71.87231	61.68293	33.989957	31.868006	10.324247
## 586	0.000000000	3.0778860	68.05160	64.99026	34.243394	31.792768	9.556328
## 601	0.000000000	3.6545190	69.60583	66.36297	33.578717	29.962099	9.265306
## 612	0.048411498	2.6868381	66.01044	68.14675	37.511346	34.785174	10.332829
## 61	0.172905526	4.1639929	91.46471	88.57219	46.165775	42.126560	11.144385
## 216	0.089160839	3.6660839	90.18514	79.46678	38.314685	34.666084	9.078671
## 462	0.107309487	2.6609642	74.30669	65.20062	28.609642	25.973561	6.052877
## 583	0.000000000	2.7754491	58.16587	60.42066	32.721557	30.205090	8.089820
## 346	0.176110260	2.8514548	78.71930	77.52680	33.859112	31.627871	6.699847
## 458	0.053375196	4.7127159	67.46013	58.42700	27.025118	24.855573	6.210361
## 630	0.000000000	1.4312977	25.81221	21.52672	10.240458	9.412214	2.965649
## 510	0.100145138	1.4078374	58.30784	60.22206	28.822932	26.523948	7.772134
## 613	0.000000000	2.2496680	54.88964	52.70651	29.321381	27.515272	8.270916
## 635	0.000000000	0.4609665	24.34201	21.10781	14.230483	12.434944	3.624535
## 429	0.071839080	3.0301724	63.28606	61.30747	28.340517	25.482759	5.840517
## 339	0.097777778	2.5081481	73.97659	70.47259	34.690370	32.134815	7.066667

##	354	0.152350081	3.0794165	81.43387	75.22528	33.207455	30.079417	7.421394
##	400	0.040847201	2.8139183	68.24039	69.14675	36.290469	32.450832	8.299546
##	141	0.280701754	6.8982456	93.91842	88.66667	41.001754	36.971930	7.789474
##	567	0.000000000	1.7705426	70.84682	75.63876	39.499225	37.060465	9.322481
##	91	0.201107011	4.8376384	89.68118	95.35609	47.987085	42.972325	9.202952
##	251	0.025036819	3.2341679	67.79720	69.46392	37.620029	34.699558	9.064801
##	171	0.181818182	3.7329545	98.10455	90.19886	41.469697	39.191288	11.443182
##	347	0.000000000	3.9408784	82.36588	76.51014	38.623311	36.359797	9.527027
##	319	0.056463596	3.9450223	75.02585	74.76374	39.630015	36.390788	7.894502
##	372	0.147011309	3.0403877	75.26656	81.00485	41.462036	37.360258	8.394184
##	320	0.054574639	5.2792937	81.53258	73.61156	38.876404	35.382022	9.754414
##	428	0.014858841	3.6760773	75.15840	75.76226	35.603269	33.585438	7.622585
##	566	0.098214286	2.9226190	79.99866	65.11905	29.477679	27.845238	8.263393
##	359	0.052800000	5.7552000	74.87232	68.93280	31.211200	28.984000	7.180800
##	547	0.000000000	3.3278443	63.15853	61.61527	30.585329	28.732036	8.303892
##	159	0.000000000	5.8418675	82.47274	71.07380	35.358434	32.579819	8.677711
##	77	0.118279570	2.3924731	85.39247	88.90681	50.480287	46.924731	11.566308
##	108	0.063291139	3.4701627	80.25009	89.12658	46.202532	41.701627	8.978300
##	624	0.000000000	1.3399209	25.11937	22.15810	12.557312	11.154150	3.122530
##	76	0.353159851	5.8141264	98.66338	96.91450	47.752788	43.579926	10.914498
##	653	0.012178620	3.2110961	64.04966	60.92693	34.373478	30.585927	9.000000
##	117	0.140157480	5.1685039	72.61496	70.68819	35.129134	32.272441	8.403150
##	207	0.019323671	4.1610306	68.96506	74.20612	39.428341	37.275362	8.418680
##	460	0.000000000	4.2022472	78.67945	70.46067	34.977528	31.388443	6.133226
##	442	0.050769231	3.2569231	71.20938	70.02615	35.383077	32.170769	7.544615
##	370	0.106109325	2.5723473	78.07267	68.64309	32.281350	29.733119	6.737942
##	152	0.044217687	4.2857143	76.13503	81.40646	41.309524	38.586735	10.022109
##	257	0.201600000	4.4416000	78.74112	83.27360	44.556800	40.684800	8.680000
##	484	0.000000000	3.5775076	70.87112	68.18541	33.299392	30.791793	8.638298
##	574	0.088059701	3.7970149	71.86209	61.16269	31.126866	28.120896	8.176119
##	554	0.028753994	2.6182109	66.94153	65.47284	35.039936	31.932907	8.809904
##	392	0.110732538	6.1277683	95.33782	86.41056	37.141397	33.838160	9.499148
##	192	0.117554859	3.9341693	79.84514	79.31818	40.736677	37.539185	11.304075
##	265	0.150000000	4.3150000	85.10033	82.67333	38.246667	35.543333	9.981667
##	275	0.000000000	3.2162162	68.46471	70.09380	37.391097	33.585056	6.558029
##	286	0.000000000	2.3405316	75.34037	80.24585	43.232558	40.053156	8.485050
##	134	0.066978193	4.8006231	81.36137	74.88941	35.166667	32.428349	8.007788
##	69	0.164601770	4.8796460	89.35664	88.06018	45.525664	40.378761	11.589381
##	155	0.000000000	4.2676864	96.87725	88.92161	44.680688	41.122371	10.108987
##	7	0.144557823	3.7363946	78.20493	89.00170	46.782313	43.034014	9.374150
##	436	0.072131148	3.8311475	80.46738	76.90000	39.334426	36.586885	8.595082
##	389	0.072196621	3.0875576	70.58694	68.80338	37.339478	35.069124	8.864823
##	490	0.000000000	6.2688822	84.50196	75.73867	31.794562	28.509063	5.728097
##	673	0.000000000	2.4049248	55.46443	54.77018	33.088919	29.471956	9.396717
##	88	0.113240418	4.2543554	95.67822	104.06098	52.761324	48.942509	13.067944
##	287	0.117103236	5.3852080	80.97149	78.62404	40.138675	37.801233	10.733436
##	414	0.060957910	3.5892598	76.03701	72.49202	33.075472	31.158200	8.492017
##	219	0.145631068	4.3996764	76.72152	73.07929	34.412621	31.707120	6.917476
##	21	0.171480144	3.6642599	81.84495	83.76715	45.019856	41.507220	10.370036
##	471	0.095100865	2.4149856	53.01153	52.67867	26.289625	23.896254	5.664265
##	513	0.000000000	3.6177778	70.07007	68.37333	32.848889	29.223704	7.899259
##	232	0.167711599	2.7507837	69.09451	72.11285	35.108150	31.840125	9.559561
##	250	0.032608696	4.0993789	70.43463	67.44720	33.852484	31.338509	8.234472
##	292	0.094575800	2.6272601	77.48081	73.22949	36.542420	33.808067	8.372740

##	659	0.040287770	3.7223022	64.73036	48.73957	24.319424	21.565468	6.752518
##	164	0.167539267	3.3123909	77.32723	78.60035	36.692845	34.034904	8.150087
##	521	0.132971506	3.5210312	71.28820	63.42469	29.318860	27.831750	7.541384
##	244	0.050974513	3.8995502	82.65007	87.14393	42.607196	37.992504	8.377811
##	584	0.000000000	2.0106383	57.88537	59.20080	32.041223	29.964096	8.658245
##	79	0.060034305	3.5300172	79.27187	79.53002	45.771870	43.181818	12.048027
##	122	0.147058824	4.0944272	86.13003	81.90402	38.176471	35.212074	10.583591
##	652	0.045454545	3.0397727	69.35895	68.45881	38.951705	36.539773	9.454545
##	4	0.059701493	3.9303483	79.55108	80.76783	41.650083	38.404643	10.621891
##	660	0.000000000	3.2301013	54.96078	51.62518	29.596237	26.347323	8.108538
##	644	0.079779917	0.8170564	50.97331	52.50619	30.939477	27.525447	7.669876
##	433	0.000000000	5.0239234	78.43238	66.54386	27.074960	25.311005	4.901116
##	618	0.000000000	0.8869863	22.29760	24.20548	14.222603	12.842466	3.897260
##	600	0.000000000	3.8973333	66.98520	59.78533	33.800000	31.582667	10.142667
##	305	0.051162791	3.0418605	75.69953	75.41240	38.519380	35.079070	8.122481
##	236	0.078740157	3.1149606	67.70472	75.75906	43.907087	41.066142	9.785827
##	448	0.154237288	3.9898305	77.48051	68.01864	31.698305	29.750847	8.252542
##	540	0.000000000	4.3724928	66.03840	54.86676	24.488539	22.914040	8.153295
##	20	0.146189736	4.8351477	80.21897	82.34837	41.469673	36.911353	7.842924
##	325	0.155088853	4.4184168	85.70598	73.14863	34.290792	31.744750	7.431341
##	100	0.224699828	3.6312178	89.18353	78.52316	37.830189	35.768439	11.123499
##	111	0.063157895	6.0333333	88.89544	83.58421	43.080702	40.143860	10.528070
##	637	0.000000000	0.9020270	25.75270	23.26351	14.229730	12.594595	3.185811
##	323	0.081037277	2.5559157	70.72447	73.49595	36.680713	34.447326	7.753647
##	591	0.083213773	2.8522238	68.13630	65.71879	37.057389	33.794835	10.482066
##	223	0.048701299	4.6233766	69.90828	74.03084	38.678571	35.301948	6.819805
##	60	0.110918544	2.4194107	72.84575	82.18718	45.575390	42.077990	10.140381
##	507	0.040816327	4.4740973	76.00283	73.10675	37.822606	35.310832	9.301413
##	394	0.121993127	4.7525773	83.98643	80.34708	37.890034	33.733677	8.323024
##	5	0.040000000	4.4563636	78.23327	83.17636	46.260000	40.880000	8.992727
##	537	0.000000000	3.8986784	69.76109	62.39354	32.602056	31.038179	9.466960
##	59	0.313373253	6.0538922	109.78403	108.31537	49.057884	45.135729	9.081836
##	514	0.043165468	1.8129496	63.35597	68.88489	36.181295	32.926619	8.882014
##	397	0.098802395	3.3248503	71.79850	60.98353	28.196108	25.341317	5.773952
##	260	0.052892562	4.3190083	72.67471	73.58678	37.894215	35.085950	7.494215
##	201	0.120743034	3.4055728	75.40666	77.73839	34.956656	33.300310	7.139319
##	276	0.099656357	4.5137457	84.83711	77.23368	36.384880	33.486254	7.797251
##	664	0.196506550	2.6783115	65.08719	57.49491	31.761281	28.905386	8.286754
##	619	0.092741935	1.2500000	26.07379	22.39516	11.262097	10.866935	3.665323
##	534	0.031531532	3.0015015	62.09489	60.41892	34.879880	32.671171	9.340841
##	417	0.080065359	2.9558824	74.15752	67.03105	30.292484	27.934641	7.643791
##	262	0.000000000	2.9377049	80.97213	83.13443	38.418033	35.542623	8.445902
##	598	0.041018388	3.4879774	72.17496	58.55728	31.127298	27.572843	9.335219
##	255	0.057096248	4.2903752	78.07276	71.10277	34.233279	32.084829	8.057096
##	71	0.139763780	4.9921260	86.64370	96.13386	50.905512	47.332677	10.862205
##	191	0.151041667	2.7118056	93.35503	92.23090	46.456597	42.494792	10.350694
##	182	0.000000000	3.6535433	73.76504	81.29921	45.889764	44.099213	9.489764
##	39	0.155080214	4.9643494	83.35811	78.73619	35.338681	33.402852	8.229947
##	597	0.000000000	2.7350200	60.08162	57.08655	33.326232	31.011984	9.784288
##	647	0.000000000	3.7006897	68.65159	66.86897	34.760000	31.191724	8.158621
##	383	0.388601036	4.0069085	80.39154	73.31779	36.340242	32.096718	8.849741
##	504	0.049766719	4.1259720	72.45272	68.37170	32.307932	29.646967	8.216174
##	183	0.222222222	3.1632997	91.63384	96.84175	51.213805	47.562290	11.971380
##	89	0.111692845	6.2809773	97.56091	88.93368	47.387435	43.214660	11.277487

##	473	0.006279435	2.8178964	68.57331	69.98116	34.753532	32.441130	8.417582
##	90	0.084714549	4.5837937	90.63112	87.80847	47.627993	43.745856	9.725599
##	424	0.112054329	5.9202037	89.21138	81.92530	35.915110	33.045840	9.453311
##	252	0.207606973	5.3106181	86.26498	82.69572	40.361331	36.053883	9.383518
##	496	0.086363636	4.2636364	61.66227	60.85303	28.674242	26.693939	6.846970
##	463	0.155416013	4.2103611	83.75416	73.27786	33.970173	31.643642	7.587127
##	535	0.046413502	3.9943741	73.51603	72.02672	37.659634	35.791842	9.260197
##	199	0.180743243	3.5236486	73.39730	76.84628	41.082770	38.989865	8.682432
##	87	0.038590604	2.7399329	81.50688	79.91107	41.395973	38.000000	9.313758
##	197	0.101426307	6.5309033	88.21743	80.61014	37.404120	34.036450	9.007924
##	291	0.083333333	4.3425926	82.00077	85.99383	40.816358	36.941358	9.984568
##	432	0.097133758	3.0047771	64.50621	63.82006	30.628981	28.117834	6.299363
##	336	0.000000000	4.7127329	76.67702	71.26553	37.950311	33.366460	7.259317
##	651	0.000000000	3.7718795	69.43214	61.54376	33.459110	30.618364	9.951220
##	157	0.000000000	3.4486405	79.71556	88.74773	45.338369	42.187311	9.321752
##	331	0.047550432	2.1152738	53.82839	56.38184	31.157061	27.971182	6.207493
##	571	0.000000000	4.0443213	67.99280	56.81856	28.427978	25.829640	7.832410
##	74	0.174397032	3.8552876	92.15288	99.23006	52.595547	47.543599	11.946197
##	640	0.000000000	1.2652330	24.54409	21.21864	9.992832	8.967742	3.075269
##	524	0.044822257	3.6398764	71.22921	68.59351	34.703246	32.746522	10.499227
##	72	0.143089431	3.6650407	83.98992	88.09756	49.533333	44.721951	9.429268
##	447	0.000000000	3.2813008	77.83382	76.67317	37.970732	34.580488	6.767480
##	670	0.000000000	2.2337662	55.12092	48.10678	24.174603	21.440115	6.593074
##	64	0.116279070	5.0631229	82.17841	73.45017	36.318937	35.151163	8.911960
##	363	0.035007610	4.5585997	82.89209	79.37747	40.636225	36.689498	8.378995
##	399	0.000000000	4.7166172	75.46751	74.72404	39.240356	35.879822	8.551929
##	115	0.195028681	7.4722753	95.16960	90.19120	41.894837	37.862333	8.294455
##	650	0.037786775	2.1551957	57.47773	52.82591	30.632928	28.221323	8.240216
##	493	0.169895678	3.8315946	64.29627	60.88376	30.289121	28.323398	7.590164
##	66	0.000000000	3.7570423	78.55018	82.52641	43.936620	39.702465	7.970070
##	421	0.000000000	2.8270677	75.16662	77.59248	35.965414	33.315789	6.395489
##	148	0.066255778	1.8567026	59.38598	61.38983	34.848998	32.289676	7.898305
##	559	0.000000000	1.9279141	68.32991	71.39571	40.055215	36.889571	9.796012
##	385	0.073795181	5.3207831	74.88223	68.60241	31.269578	28.518072	6.843373
##	302	0.071082391	2.9240711	70.04443	75.63166	44.054927	39.279483	7.810985
##	437	0.186046512	4.2635659	76.96961	70.70698	28.279070	26.407752	5.706977
##	452	0.104404568	5.6035889	85.73214	75.83850	32.066884	28.719413	6.928222
##	290	0.237232290	4.6606260	85.76870	83.27018	40.993410	37.568369	10.565074
##	226	0.213483146	2.3707865	77.95425	77.93258	39.918138	36.545746	8.298555
##	621	0.096491228	0.8640351	27.58684	21.70175	12.798246	11.315789	3.627193
##	53	0.054006969	4.1010453	85.85244	81.43554	42.055749	36.961672	9.313589
##	154	0.321305842	3.9398625	96.24553	84.30756	43.640893	39.718213	9.596220
##	667	0.081471748	4.4901445	67.74888	56.25361	25.428384	21.779238	6.315375
##	301	0.259016393	4.7901639	86.51672	76.93607	38.418033	35.144262	9.618033
##	497	0.098256735	2.9508716	76.17433	68.80666	33.765452	30.664025	8.767036
##	309	0.092043682	4.6271451	80.09657	71.25273	36.831513	34.115445	8.878315
##	585	0.045580110	2.2361878	59.62721	53.34945	26.625691	25.299724	7.497238
##	409	0.095808383	4.2125749	77.52051	72.98054	32.669162	30.633234	7.175150
##	373	0.062130178	2.9053254	74.76243	76.53698	38.822485	34.789941	7.582840
##	67	0.072968491	2.9154229	74.86617	76.56716	42.200663	39.328358	10.714760
##	614	0.047687861	3.1387283	69.48454	63.84393	33.106936	31.553468	9.190751
##	322	0.235104670	4.8792271	79.58647	79.41546	38.742351	36.779388	10.098229
##	636	0.014388489	0.6546763	25.17194	21.51439	11.467626	10.705036	3.384892
##	202	0.000000000	4.0833333	79.20314	79.00943	42.418239	38.177673	9.784591

##	582	0.000000000	4.0209790	63.02350	52.68252	26.858741	25.085315	6.843357
##	405	0.048062016	4.2573643	74.35209	67.83876	32.793798	30.151938	7.855814
##	218	0.143556281	3.2854812	89.21028	90.24959	46.991843	42.654160	9.257749
##	68	0.000000000	3.1211604	82.14454	81.43857	43.151877	37.912969	8.943686
##	303	0.224699828	4.2590051	84.47650	74.79588	33.114923	30.379074	7.221269
##	310	0.057192374	3.3570191	81.68076	80.84055	38.807626	35.493934	9.369151
##	544	0.000000000	1.8301370	59.39562	61.61918	33.030137	30.721918	8.375342
##	238	0.288624788	3.6587436	74.60764	74.75891	42.694397	38.933786	9.076401
##	615	0.000000000	0.8307692	25.33038	24.83462	14.430769	13.492308	4.334615
##	181	0.078907436	4.5144158	77.75690	86.24583	48.534143	44.414264	12.218513
##	562	0.000000000	1.9650350	64.43245	61.88252	36.633566	33.227972	8.079720
##	341	0.049327354	4.5231689	71.86846	72.36622	33.925262	30.892377	6.379671
##	446	0.035765379	3.2389127	66.51144	61.62232	30.733906	27.450644	4.527897
##	137	0.129934211	3.6447368	84.95148	83.36842	43.768092	40.569079	10.631579
##	374	0.125996810	4.7368421	77.94992	73.15789	31.797448	29.027113	7.384370
##	672	0.044412607	2.4871060	55.97378	48.32092	24.823782	22.954155	7.823782
##	23	0.058823529	3.6856618	82.80165	89.89338	44.645221	40.391544	9.308824
##	213	0.229390681	5.4516129	101.08871	96.30824	43.456989	39.405018	10.437276
##	443	0.104100946	5.2933754	83.15489	76.37382	33.276025	30.487382	6.544164
##	381	0.257142857	4.4507937	82.02175	78.90159	36.595238	32.400000	7.025397
##	212	0.102333932	5.2603232	80.16445	74.85817	37.682226	34.360862	9.274686
##	494	0.000000000	6.1418021	75.77415	70.77991	27.267356	24.771049	6.093058
##	542	0.000000000	5.0168539	70.43202	64.44944	31.359551	28.907303	8.054775
##	280	0.016845329	2.8973966	67.81485	71.14395	38.727412	36.180704	8.067381
##	431	0.200328407	4.6551724	85.28309	76.64368	34.927750	32.095238	8.991790
##	18	0.094616639	4.1370310	85.71044	88.03752	44.021207	39.522023	8.314845
##	312	0.092879257	4.0386997	72.45557	70.28483	35.496904	33.614551	7.032508
##	278	0.110561056	4.1600660	82.54422	80.72112	39.640264	35.432343	7.790429
##	556	0.043143297	2.3050847	68.84391	59.78428	29.932203	27.796610	8.459168
##	180	0.099821747	3.2281640	83.00036	82.91979	44.144385	41.385027	12.572193
##	209	0.102177554	5.2814070	91.82513	82.39363	36.236181	33.281407	9.140704
##	19	0.000000000	4.9574830	87.12058	91.97449	51.506803	46.501701	10.102041
##	177	0.213355049	2.8371336	80.92915	80.45114	42.431596	38.713355	8.013029
##	150	0.213355049	3.3127036	80.57915	73.54072	36.866450	32.586319	7.509772
##	476	0.027818448	3.3279649	63.66281	60.85798	29.834553	27.508053	6.424597
##	109	0.049382716	5.3456790	82.43721	77.55203	39.723104	36.754850	11.243386
##	470	0.061797753	3.7401685	69.18048	65.85534	31.037921	28.876404	7.675562
##	627	0.000000000	1.2297735	25.00421	19.86084	9.747573	8.291262	2.634304
##	93	0.100318471	2.9697452	79.85828	83.10669	46.506369	41.762739	8.353503
##	445	0.085496183	3.5206107	67.40198	67.25954	30.874809	28.097710	6.610687
##	84	0.059440559	2.4213287	81.98846	91.08042	53.027972	48.938811	12.965035
##	456	0.000000000	3.7044410	74.96508	79.97550	37.649311	35.437979	7.073507
##	382	0.268333333	3.4116667	82.63500	69.95667	34.006667	31.810000	9.030000
##	50	0.244485294	3.1727941	90.25129	83.98162	40.193015	36.505515	10.884191
##	416	0.023622047	6.5102362	76.53654	72.74488	33.362205	31.566929	9.696063
##	92	0.090277778	3.2083333	67.05990	67.21354	37.861111	35.090278	9.602431
##	641	0.045454545	0.5871212	24.83864	22.55303	14.359848	13.208333	3.780303
##	530	0.042813456	2.9113150	76.05229	74.30581	39.243119	36.932722	11.345566
##	247	0.094754653	5.0930626	84.11438	85.00169	43.153976	40.456853	9.521151
##	196	0.095486111	2.2031250	78.67483	79.13542	43.748264	40.706597	11.355903
##	314	0.050075873	3.2807284	74.35372	74.29287	35.549317	33.323217	8.566009
##	665	0.000000000	1.6711409	53.58201	49.84430	28.786577	27.210738	7.524832
##	594	0.000000000	1.9376694	60.74011	63.13415	35.800813	32.199187	10.302168
##	379	0.098130841	4.6697819	86.60498	72.36293	31.573209	28.482866	5.166667

##	272	0.000000000	2.7340426	75.91307	74.97872	36.613982	34.867781	6.732523
##	96	0.207339450	5.0899083	95.95101	92.92661	50.394495	47.297248	10.867890
##	351	0.096822995	5.0060514	85.28548	73.31467	31.786687	29.942511	7.455371
##	98	0.000000000	4.1698440	89.32860	102.00520	57.509532	51.462738	11.474870
##	264	0.000000000	4.8899083	82.03349	83.42355	42.735474	39.418960	8.551988
##	506	0.087769784	2.8143885	63.48604	65.85468	37.135252	33.997122	7.815827
##	47	0.052453469	3.4906937	81.58849	81.75804	41.874788	38.179357	8.417936
##	172	0.130225080	3.1318328	83.14759	87.32797	44.863344	42.226688	11.831190
##	411	0.108474576	4.6661017	77.30915	72.07458	34.961017	31.661017	8.894915
##	151	0.052227343	4.5053763	86.51628	83.37020	43.104455	38.066052	8.603687
##	103	0.112820513	4.4256410	83.43607	80.73333	41.784615	37.376068	8.664957
##	378	0.000000000	4.3010753	78.28034	69.53456	30.937020	27.993856	6.425499
##	268	0.055921053	3.3914474	80.13059	80.91941	41.310855	37.807566	7.379934
##	11	0.045296167	5.0174216	94.60801	86.05401	41.437282	37.925087	10.642857
##	45	0.152684564	5.6476510	97.56074	93.09228	45.085570	41.505034	10.372483
##	365	0.084464555	3.9894419	77.04072	70.17647	34.539970	32.583710	8.772247
##	139	0.292483660	3.6764706	79.14216	74.02288	35.751634	31.903595	8.540850
##	575	0.066216216	3.9405405	59.33324	48.97973	23.459459	21.520270	6.972973
##	671	0.000000000	1.5411061	63.02646	61.43199	34.469357	31.547085	9.680120
##	604	0.046544429	4.0662906	71.69732	62.08322	30.730606	29.258110	9.159379
##	187	0.042808219	4.5530822	84.61815	82.29281	41.986301	37.777397	9.566781
##	16	0.000000000	3.8660436	76.78255	90.51558	47.587227	44.161994	9.157321
##	565	0.000000000	3.3764205	67.71378	64.85085	35.576705	32.700284	9.461648
##	607	0.000000000	4.0241135	64.95404	61.86383	33.375887	30.802837	9.226950
##	413	0.049689441	4.8090062	85.63866	74.21894	33.194099	30.242236	7.579193
##	185	0.115586690	1.5534151	73.31839	83.52014	45.394046	40.250438	10.626970
##	477	0.032171582	2.4423592	54.75295	60.10456	31.920912	30.222520	6.845845
##	500	0.040106952	2.7339572	51.94131	49.35963	25.877005	23.792781	5.561497
##	145	0.271157168	5.0500864	96.10760	88.52850	39.927461	36.868739	7.215889
##	337	0.086115993	4.0298770	86.18313	86.18278	41.093146	38.462214	7.806678
##	51	0.052158273	5.6169065	96.87950	88.28058	39.719424	35.622302	8.705036
##	406	0.115774240	3.1722142	61.80130	55.40376	27.526773	25.335745	6.704776
##	377	0.119549930	4.1954993	73.37300	73.36568	33.832630	31.043601	6.980309
##	116	0.356401384	4.7179931	95.68045	88.64879	41.164360	37.081315	9.382353
##	113	0.299645390	4.9184397	87.20106	87.42021	44.015957	41.984043	10.632979
##	311	0.160937500	4.2515625	77.15516	72.52656	34.932812	31.812500	8.473437
##	25	0.122641509	4.1566038	81.73774	81.22264	43.026415	38.766038	9.641509
##	2	0.240213523	6.3167260	95.66797	86.48043	39.864769	37.010676	10.115658
##	266	0.099848714	3.9652042	85.42269	80.02118	41.393343	37.568835	9.027231
##	560	0.000000000	4.0459110	74.28852	64.76040	32.393113	30.585366	8.773314
##	393	0.000000000	2.9606513	64.87463	70.72320	36.131615	33.236092	7.793758
##	454	0.138674884	4.2003082	73.09707	70.52851	30.848998	27.614792	4.998459
##	631	0.000000000	0.8326848	25.39455	23.85992	13.961089	12.719844	3.466926
##	355	0.145482389	4.9142420	86.35636	77.81930	37.030628	34.624809	9.938744
##	221	0.089075630	3.7865546	82.31126	84.60168	42.235294	39.727731	10.426891
##	576	0.000000000	2.9248021	67.43483	62.04617	32.102902	29.635884	7.651715
##	395	0.081081081	2.0284495	64.53570	66.14083	34.095306	31.129445	7.160740
##	633	0.020746888	1.6016598	29.55975	25.85477	11.742739	10.746888	3.614108
##	249	0.023041475	3.8448541	70.45361	72.33333	36.542243	33.658986	6.989247
##	277	0.000000000	4.6986667	68.57840	68.39867	33.645333	31.573333	7.324000
##	529	0.000000000	3.1936416	66.41113	63.85983	35.260116	32.397399	8.731214
##	459	0.127694859	2.9684909	80.96849	68.34826	29.378109	26.928690	6.938640
##	662	0.068249258	4.0979228	67.16869	56.32641	29.057864	25.850148	8.767062
##	451	0.096666667	2.7100000	66.83533	64.86000	32.450000	29.663333	6.220000

##	348	0.153846154	3.2940171	77.53162	69.23590	32.254701	29.697436	7.989744
##	526	0.000000000	4.4422188	74.46287	67.55624	32.526965	30.147920	9.018490
##	638	0.000000000	0.8112450	20.66627	18.85141	11.485944	10.923695	2.919679
##	35	0.180327869	4.6885246	93.35847	100.63388	56.755920	51.779599	11.994536
##	489	0.030075188	2.7684211	64.91128	69.61353	33.154887	29.974436	6.929323
##	654	0.000000000	3.0489614	67.12448	56.17359	30.320475	27.651335	8.271513
##	229	0.003246753	4.4837662	71.41786	75.23864	37.586039	35.110390	8.592532
##	646	0.035567715	1.7729138	55.48673	56.30917	34.686731	33.012312	8.796170
##	317	0.000000000	3.6513353	78.41246	78.93175	40.983680	38.922849	10.623145
##	425	0.186186186	4.7552553	74.03649	63.22523	26.555556	24.211712	5.632132
##	488	0.120184900	1.4298921	63.51202	59.52080	31.046225	28.244992	7.788906
##	99	0.167272727	4.4672727	91.46909	101.34727	55.365455	49.938182	11.807273
##	205	0.224738676	4.7630662	95.02387	86.93380	38.813589	35.398955	9.914634
##	533	0.000000000	1.2111437	55.49985	54.68035	32.379765	29.759531	9.482405
##	81	0.040000000	4.6763636	95.14745	92.90909	47.967273	43.363636	11.789091
##	1	0.630597015	4.6809701	96.09459	84.74440	37.070896	33.220149	7.082090
##	367	0.116638079	6.6123499	84.67753	79.05317	39.072041	35.475129	8.034305
##	283	0.000000000	3.0958466	84.16246	81.61342	40.263578	36.664537	9.258786
##	13	0.157608696	3.2898551	94.70326	98.87681	51.152174	47.552536	11.384058
##	208	0.000000000	2.1362862	78.84549	80.88927	40.962521	37.369676	9.977853
##	527	0.000000000	2.7432836	73.34119	62.49254	29.356716	27.398507	7.594030
##	161	0.145000000	7.3683333	96.15817	76.36333	31.958333	29.386667	7.510000
##	475	0.218750000	3.8802083	85.17674	82.51736	40.260417	36.932292	9.161458
##	512	0.000000000	4.6597222	68.05806	60.08611	28.815278	27.140278	6.070833
##	9	0.476744186	3.9825581	103.63217	96.81008	45.732558	41.319767	9.218992
##	420	0.102728732	4.6821830	87.34366	74.52970	33.364366	31.489567	9.330658
##	289	0.166934189	3.1139647	81.98283	76.10754	33.996790	30.563403	6.139647
##	195	0.210834553	4.1185944	84.85695	85.60029	43.704246	39.569546	9.285505
##	269	0.048484848	3.0651515	66.66273	69.55909	36.898485	34.290909	8.578788
##	335	0.046280992	4.5223140	82.27091	76.30083	39.919008	36.236364	8.391736
##	17	0.133099825	4.2416813	76.62680	76.92119	42.485114	39.208406	8.602452
##	297	0.000000000	2.2052067	63.39709	61.66003	30.415008	28.692190	6.618683
##	666	0.081424936	3.4300254	67.98982	58.76718	31.933842	28.889313	9.354962
##	623	0.000000000	1.0253623	25.34058	25.19928	14.724638	14.231884	3.989130
##	190	0.000000000	7.2842809	82.87676	84.70569	41.207358	38.561873	8.483278
##	295	0.152380952	5.2444444	90.61540	87.36032	38.949206	35.731746	8.798413
##	222	0.382943144	5.0802676	91.63328	87.23579	38.406355	33.926421	9.237458
##	501	0.000000000	5.8694215	77.17603	70.40992	33.464463	30.917355	8.800000
##	464	0.043939394	5.3060606	82.88667	69.95758	30.045455	27.674242	7.104545
##	140	0.272727273	6.0040404	100.93313	99.70505	45.632323	41.002020	9.246465
##	176	0.052713178	5.4542636	85.41054	86.14574	36.925581	33.530233	8.266667
##	558	0.043356643	2.7650350	65.06294	53.68112	27.432168	25.118881	5.924476
##	546	0.010189229	2.4235808	55.50131	54.10044	30.404658	27.307132	7.470160
##	102	0.084837545	3.0180505	79.23069	82.30144	45.045126	40.779783	9.875451
##	12	0.162878788	5.8693182	92.75549	89.61742	43.219697	39.011364	10.202652
##	430	0.132203390	5.2627119	84.14831	82.92373	37.044068	34.949153	9.961017
##	350	0.047128130	2.3166421	63.75449	66.33284	35.372607	31.908689	6.995582
##	516	0.000000000	3.2015504	64.46248	59.25736	30.305426	28.300775	8.953488
##	14	0.144981413	5.2323420	84.24331	81.04089	37.652416	33.752788	8.628253
##	577	0.098283931	4.2730109	76.63120	70.70983	33.455538	31.110764	8.224649
##	403	0.000000000	4.9679487	73.12003	61.73077	27.589744	25.785256	6.608974
##	10	0.119133574	2.4783394	79.59152	83.28520	43.776173	40.433213	10.366426
##	531	0.007385524	3.6706056	74.31167	66.03397	31.437223	28.819793	9.301329
##	342	0.054726368	4.7611940	72.63068	75.57877	38.865672	36.210614	7.688226

##	465	0.248840804	6.0927357	79.17883	69.71716	30.208655	28.510046	5.752705
##	210	0.000000000	2.7107438	78.92512	89.43802	48.940496	45.233058	9.548760
##	132	0.000000000	4.7544910	76.87455	81.94311	45.967066	42.494012	11.402695
##	390	0.000000000	2.5496183	62.29817	59.95115	30.671756	28.709924	6.943511
##	228	0.041009464	3.3548896	76.45931	83.29022	44.761830	41.681388	11.119874
##	271	0.000000000	4.2716049	87.63210	79.86574	35.401235	32.070988	6.106481
##	520	0.000000000	2.5580357	65.77247	61.23512	33.132440	30.873512	7.955357
##	304	0.000000000	2.2345133	76.19366	76.20649	41.594395	37.396755	8.974926
##	133	0.105065666	3.7242026	72.43790	79.24015	42.125704	37.442777	8.189493
##	28	0.111111111	6.2609428	90.51229	86.34175	43.208754	39.308081	9.161616
##	561	0.000000000	2.7614679	66.71678	58.15203	27.618611	25.715596	6.665793
##	200	0.053225806	3.2951613	74.03258	78.98871	42.000000	38.462903	9.235484
##	144	0.112721417	3.8470209	59.99098	62.23994	31.771337	28.494364	7.028986
##	274	0.000000000	3.1784661	77.24351	76.99115	39.746313	35.843658	7.764012
##	376	0.402877698	4.7679856	87.46763	75.55216	30.370504	28.473022	7.215827
##	293	0.000000000	4.1255887	68.47943	66.44741	31.087912	29.254317	6.747253
##	225	0.049050633	5.9382911	84.01804	79.53481	33.454114	30.375000	7.215190
##	444	0.095163807	5.5881435	82.29641	73.14041	31.185647	28.998440	7.987520
##	332	0.034090909	3.0519481	68.29205	70.48864	39.681818	36.344156	9.724026
##	149	0.094703050	4.7993579	76.60337	76.00161	41.593900	38.443018	8.863563
##	628	0.000000000	1.4290909	18.60327	17.90909	9.494545	8.490909	2.498182
##	263	0.000000000	4.3085271	86.04775	81.79690	38.548837	35.782946	7.686822
##	384	0.132075472	2.7389937	71.29072	68.71698	34.839623	31.963836	8.185535
##	388	0.030581040	5.9587156	75.36957	71.37156	32.555046	29.854740	8.429664
##	356	0.000000000	4.7978227	76.73297	68.08243	32.953344	30.517885	7.592535
##	358	0.050304878	2.9039634	72.32927	69.27591	32.984756	29.647866	6.541159
##	130	0.229059829	3.6957265	92.41487	89.42735	48.076923	43.859829	11.222222
##	629	0.000000000	1.1767068	27.82530	22.53815	12.425703	11.048193	3.261044
##	481	0.085294118	4.2308824	75.51412	70.95735	34.722059	32.322059	8.050000
##	83	0.033840948	4.9120135	91.75770	100.06768	51.680203	46.947547	10.906937
##	112	0.089093702	2.7987711	76.85484	73.53303	37.926267	34.956989	9.159754
##	386	0.085072231	3.6308186	79.49278	75.16212	34.589085	31.311396	7.343499
##	455	0.139062500	4.8656250	82.29469	77.27344	35.812500	32.451563	9.629687
##	211	0.222580645	3.9387097	84.56823	83.56452	44.079032	40.532258	10.501613
##	75	0.213768116	3.6612319	91.98207	89.54891	46.333333	42.699275	11.376812
##	97	0.239051095	4.2937956	86.07609	82.93248	44.067518	40.363139	11.527372
##	8	0.177892919	4.7478411	84.81572	84.49396	44.480138	41.000000	10.639033
##	609	0.077142857	1.5542857	53.65643	53.53714	31.211429	27.812857	9.125714
##	491	0.000000000	3.7064897	74.38510	67.50885	35.156342	31.591445	8.668142
##	136	0.109401709	7.2427350	96.35675	85.35897	39.264957	36.446154	9.941880
##	328	0.101190476	3.3645833	75.34881	71.27679	37.385417	34.485119	9.504464
##	241	0.052227343	4.1520737	82.95238	80.19355	40.284178	37.356375	8.686636
##	423	0.021346470	2.0295567	65.84417	70.11823	39.009852	35.566502	9.190476
##	55	0.056042032	4.6847636	95.02137	101.09807	52.961471	47.563923	13.110333
##	581	0.044016506	3.5020633	63.62201	59.01376	30.257221	27.363136	6.033012
##	398	0.150387597	4.0201550	77.40016	78.22636	39.221705	35.158140	6.424806
##	121	0.245931284	6.9041591	99.46383	84.17541	40.361664	37.363472	10.074141
##	580	0.040057225	6.1058655	67.78870	63.30758	31.494993	29.184549	8.530758
##	434	0.047692308	3.5969231	72.43246	67.28462	31.898462	29.272308	7.201538
##	483	0.000000000	3.6543210	62.39552	58.20833	28.419753	26.663580	5.969136
##	56	0.161764706	6.7757353	102.84724	88.32353	46.167279	42.202206	12.181985
##	306	0.000000000	4.4784615	88.09123	80.71385	36.276923	32.170769	6.336923
##	160	0.080843585	3.7820738	69.05659	73.95431	39.674868	36.451670	8.149385
##	569	0.000000000	4.0595238	64.68836	55.26190	25.982804	23.780423	7.543651

##	655	0.000000000	3.1545961	65.21184	59.51950	34.005571	31.384401	8.147632
##	189	0.069182390	3.3128931	76.94544	74.89623	35.822327	32.073899	7.430818
##	261	0.048589342	3.6457680	83.20925	87.11129	44.021944	41.316614	11.153605
##	52	0.221621622	3.5207207	79.89333	80.02523	44.666667	41.410811	10.574775
##	329	0.102006689	4.2591973	73.85552	70.91472	35.222408	32.954849	8.193980
##	658	0.000000000	2.3579921	58.40700	50.61427	26.128137	22.528402	5.833554
##	326	0.094405594	5.7045455	80.38549	72.54021	36.622378	32.162587	8.503497
##	227	0.102339181	1.9619883	73.45789	75.19883	38.097953	34.697368	8.745614
##	509	0.000000000	3.4432177	85.39874	83.74921	40.209779	38.250789	11.963722
##	318	0.051321928	5.2395023	75.36967	73.66096	34.909798	32.919129	9.147745
##	352	0.155172414	5.9326019	82.88464	71.01567	31.426332	29.264890	7.037618
##	579	0.039381153	2.6596343	72.35148	65.33755	31.867792	29.185654	6.821378
##	230	0.024147727	3.1193182	73.36108	69.23295	38.757102	35.049716	9.828125
##	246	0.151919866	2.1602671	79.72838	78.65275	42.759599	39.826377	8.053422
##	563	0.000000000	3.5821530	71.17663	68.72380	35.103399	31.963173	9.735127
##	31	0.160984848	4.0170455	93.24564	87.00568	46.140152	43.234848	11.297348
##	126	0.112698413	6.7158730	95.71000	81.24603	34.158730	30.671429	7.187302
##	313	0.058139535	4.9435216	85.65897	82.17276	40.943522	38.495017	9.689369
##	242	0.095709571	5.6336634	87.94950	90.67492	42.122112	39.450495	8.996700
##	120	0.054908486	6.0732113	92.22978	86.77870	43.500832	39.665557	8.480865
##	101	0.298429319	2.6300175	89.79948	82.91798	37.448517	33.363002	8.926702
##	616	0.000000000	0.9652778	23.93125	21.21875	10.576389	9.517361	2.611111
##	419	0.047468354	4.3037975	75.79272	72.53481	35.726266	32.128165	8.129747
##	557	0.044897959	3.2925170	70.93415	62.08844	29.846259	27.850340	7.595918
##	78	0.197614991	5.5604770	85.90187	84.70528	42.115843	38.833049	9.770017
##	217	0.000000000	4.8427152	89.28113	81.69040	41.826159	38.357616	11.149007
##	43	0.118279570	4.1111111	88.67061	85.82437	42.594982	36.716846	8.482079
##	632	0.051282051	1.0341880	24.44316	21.63675	12.658120	11.170940	3.829060
##	284	0.044843049	3.6591928	82.51076	85.01943	41.890882	37.811659	10.434978
##	552	0.132768362	3.1822034	71.38757	67.10311	33.285311	30.475989	8.367232
##	570	0.000000000	2.4101839	61.13041	57.02970	32.946252	30.821782	7.998586
##	194	0.095158598	4.0818030	82.87279	79.25710	35.073456	32.111853	9.838063
##	661	0.021276596	3.4780142	60.99277	50.60993	26.592908	23.580142	7.385816
##	453	0.112462006	4.8069909	75.61581	68.90122	30.712766	27.794833	6.217325
##	294	0.036544850	3.0332226	69.45033	63.98173	30.873754	28.991694	6.277409
##	156	0.047095761	2.7943485	65.99089	68.99686	36.411303	33.395604	8.794349
##	362	0.049504950	3.5660066	79.56832	71.02145	37.688119	34.782178	8.120462
##	285	0.049459042	3.7527048	77.36816	78.98145	39.395672	36.185471	6.610510
##	578	0.000000000	2.5308465	63.57274	58.03300	29.183644	27.048780	6.843615
##	220	0.000000000	3.3670134	71.32585	70.86478	35.317979	32.818722	6.907875
##	142	0.153846154	5.6284779	83.84681	79.65139	41.057283	38.081833	7.970540
##	15	0.186792453	6.2415094	100.71170	96.54906	43.654717	39.290566	8.939623
##	608	0.000000000	3.2202937	62.70734	57.76235	30.883845	28.614152	9.094793
##	300	0.049401198	3.4161677	77.21138	79.54491	37.206587	34.811377	8.468563
##	163	0.165775401	5.1265597	100.05276	100.75579	48.516934	45.675579	11.657754
##	548	0.046686747	3.3268072	75.25316	72.62199	35.141566	32.418675	8.762048
##	634	0.092369478	0.8594378	22.39880	23.58635	13.008032	11.787149	3.180723
##	555	0.000000000	3.8716216	68.73568	63.10946	33.241892	30.495946	8.229730
##	511	0.082031250	4.3450521	62.01354	50.73568	24.528646	23.227865	6.519531
##	368	0.000000000	2.2766917	75.23098	75.43459	38.496241	34.461654	9.043609
##	70	0.052287582	4.6977124	88.09150	88.55719	48.648693	44.406863	11.102941
##	239	0.000000000	4.3121784	89.46913	89.23328	38.766724	35.430532	9.893654
##	123	0.059440559	3.8863636	81.28217	89.33042	50.870629	47.713287	11.564685
##	333	0.000000000	4.3987730	82.56012	71.08129	32.338957	28.418712	6.354294

##	138	0.221476510	5.3154362	88.43691	83.95973	38.073826	35.567114	10.068792
##	224	0.119528620	4.0909091	90.68822	90.02189	41.737374	38.215488	10.624579
##	193	0.068800000	5.1088000	80.17920	81.83840	38.950400	35.172800	7.851200
##	645	0.075471698	3.6913747	63.61779	53.73989	27.311321	25.164420	7.327493
##	649	0.124629080	4.1973294	72.91721	60.94214	32.203264	29.065282	9.161721
##	656	0.000000000	3.3535912	54.42238	50.63950	28.393646	26.037293	6.754144
##	135	0.221269297	2.6312178	75.21441	80.79931	43.698113	40.457976	10.420240
##	498	0.157142857	3.1777778	75.60508	70.77937	32.728571	30.161905	7.255556
##	387	0.163987138	4.5852090	79.60225	69.83601	29.821543	27.226688	7.508039
##	439	0.103448276	4.7648903	74.69091	64.59718	27.313480	25.095611	6.835423
##	330	0.210873147	2.0741351	79.90329	80.43987	39.896211	37.257002	9.021417
##	599	0.091298146	1.4593438	62.11883	59.47361	34.911555	32.914408	9.901569
##	467	0.105015674	1.8150470	57.87163	58.88088	29.645768	27.355799	6.658307
##	538	0.045714286	3.4242857	69.96443	67.10857	34.984286	32.305714	8.152857
##	587	0.000000000	2.7829037	61.54328	59.67978	29.690638	27.099050	8.390773
##	175	0.110584518	1.6982622	75.55482	74.77725	43.565561	38.374408	8.650869
##	589	0.031486146	2.7141058	67.39081	61.12217	34.831234	31.987406	8.508816
##	622	0.000000000	1.2851406	28.85221	30.81928	18.550201	16.883534	4.168675
##	518	0.100449775	4.3388306	69.03028	68.83208	34.940030	32.641679	9.746627
##	203	0.000000000	3.3592715	80.39603	85.74834	42.587748	39.846026	8.649007
##	179	0.102893891	3.8054662	81.51029	74.70418	35.577170	32.969453	9.588424
##	422	0.049152542	3.4220339	85.78763	78.40508	34.413559	32.576271	7.072881
##	214	0.211191336	4.0379061	83.66318	79.73105	36.586643	34.043321	7.240072
##	605	0.044077135	2.9421488	60.80275	59.61295	31.396694	28.871901	10.181818
##	178	0.055091820	4.1268781	87.32003	83.94157	43.549249	38.527546	9.500835
##	344	0.146118721	2.6636225	77.40152	78.42618	41.818874	37.960426	9.190259
##	461	0.029315961	4.6042345	78.41922	69.00163	30.162866	26.828990	5.954397
##	440	0.103235747	3.3528505	71.95331	68.82897	33.822804	30.707242	8.422188
##	449	0.028208745	1.9548660	66.92355	70.39069	37.416079	35.117066	7.696756
##	606	0.000000000	2.3679775	61.24733	59.67135	34.213483	30.970506	9.866573
##	418	0.050691244	3.4070661	70.09908	64.64977	32.867896	30.989247	7.542243
##	550	0.099397590	1.7274096	72.74367	74.77560	37.500000	35.100904	8.734940
##	62	0.000000000	4.5537459	80.16808	88.28502	46.469055	43.153094	11.680782
##	371	0.055369128	5.8322148	86.11661	79.65772	36.476510	33.364094	8.186242
##	106	0.054574639	3.5682183	78.79406	82.24238	43.033708	38.548957	9.658106
##	184	0.109923664	4.5312977	76.79695	72.23817	34.590840	31.859542	9.054962
##	188	0.227805695	5.8542714	99.75745	96.98995	44.621441	41.371859	10.048576
##	321	0.055384615	3.9353846	72.08662	69.24000	33.290769	30.276923	6.807692
##	539	0.046808511	3.6141844	67.50057	63.14610	31.624113	30.014184	9.887943
##	186	0.099838969	5.5281804	87.16087	80.61514	38.133655	35.830918	9.647343
##	307	0.000000000	2.3730650	69.35913	77.60372	40.277090	37.534056	9.561920
##	590	0.040650407	2.0785908	66.12629	61.73171	31.781843	29.157182	8.249322
##	485	0.000000000	3.4560117	70.64868	73.22287	33.055718	30.696481	7.717009
##	573	0.037707391	3.0588235	70.44480	63.23831	32.045249	29.683258	7.903469
##	254	0.042944785	2.4601227	72.25153	74.25307	40.315951	38.200920	7.565951
##	34	0.286852590	4.5657371	96.07928	93.32470	40.225100	37.081673	9.890438
##	131	0.051282051	4.4711538	83.01891	83.67468	42.200321	37.786859	9.330128
##	536	0.038690476	2.2827381	65.03839	69.49702	37.635417	35.497024	9.566964
##	487	0.000000000	4.4203338	71.52731	63.99697	30.110774	28.233687	7.911988
##	338	0.075414781	4.8280543	72.56652	67.79487	32.512821	30.968326	7.708899
##	94	0.000000000	5.1041322	68.73636	64.47769	36.312397	32.690909	8.204959
##	343	0.143081761	3.6430818	72.18836	66.33176	33.685535	31.432390	6.231132
##	204	0.108239095	3.5476575	82.37092	77.16801	38.780291	36.229402	9.376414
##	104	0.100977199	3.9169381	86.97687	80.64007	40.161238	36.750814	9.482085

##	107	0.117554859	1.9655172	69.69389	72.69906	42.277429	39.206897	11.180251
##	457	0.049155146	3.7680492	80.32550	74.39631	32.858679	29.737327	7.235023
##	366	0.076583211	3.7525773	65.50221	64.36966	32.035346	29.013255	7.673049
##	515	0.034285714	6.1028571	73.34843	68.16429	29.041429	26.851429	6.990000
##	410	0.189573460	6.0031596	87.70537	71.22117	31.562401	28.357030	8.124803
##	426	0.026856240	3.9431280	74.80126	65.14850	28.706161	26.721959	5.186414
##	564	0.000000000	5.1439060	80.84787	73.82819	41.110132	38.205580	10.161527
##	174	0.236363636	3.4958678	84.85421	88.54545	47.522314	42.970248	10.266116
##	596	0.045454545	3.2331378	66.41848	69.25806	38.357771	36.521994	9.447214
##	391	0.092356688	3.5222930	75.43185	69.82643	32.866242	31.407643	8.780255
##	273	0.187702265	4.7556634	77.63883	78.65696	38.606796	36.381877	7.106796
##	206	0.000000000	2.6360856	77.90046	88.67431	45.117737	41.616208	10.975535
##	215	0.158620690	5.6465517	74.83052	71.32586	35.565517	32.427586	8.084483
##	412	0.143074581	2.4535769	62.96027	60.87823	31.130898	29.663623	8.287671
##	360	0.083333333	6.1354167	82.07723	69.64881	29.462798	27.964286	5.794643
##	345	0.186602871	2.9106858	85.99984	85.68740	37.880383	35.740032	8.708134
##	568	0.039318480	2.2804718	62.09450	57.23067	29.112713	26.622543	8.060288
##	603	0.045261669	3.9745403	72.92320	65.22065	34.018388	31.465347	11.067893
##	253	0.049275362	2.8652174	74.51290	69.20000	34.030435	30.194203	7.657971
##	349	0.267536705	3.4029364	82.60326	80.04078	36.037520	33.678630	9.199021
##	593	0.037234043	1.8723404	59.93710	63.13564	37.617021	34.833777	10.328457
##		BB.pitch	IBB.pitch	S0.pitch	HBP.pitch	BK	WP	BF
##	617	8.816479	0.10486891	21.72659	1.4756554	0.14981273	1.6367041	96.65169
##	173	27.885671	3.16158537	53.66921	2.6478659	0.39786585	2.3460366	315.89634
##	240	24.856918	2.25943396	62.24057	2.9182390	0.13679245	1.7389937	314.83019
##	168	28.075929	3.53634895	48.79321	3.4006462	0.21163166	2.1373183	333.47173
##	36	30.839286	1.18055556	64.99603	3.2103175	0.65674603	2.3115079	334.23413
##	234	31.853261	2.54166667	67.92754	3.7173913	0.11594203	3.0597826	397.63949
##	129	36.512681	3.73550725	80.21014	3.5579710	0.16304348	2.2282609	369.38406
##	29	33.176471	3.33660131	72.10948	2.7352941	0.80065359	2.9787582	385.12745
##	657	20.748031	2.14566929	65.87795	2.6561680	0.40944882	1.9435696	243.44488
##	166	33.688213	3.50950570	70.94106	4.2528517	0.73003802	2.1425856	406.95817
##	472	25.817886	1.62276423	73.12846	2.8617886	0.00000000	2.3951220	328.09106
##	407	26.784884	2.36773256	69.16424	2.7529070	0.18895349	2.8633721	333.20785
##	46	34.790170	1.89413989	75.80340	3.5803403	0.31758034	4.2022684	412.05104
##	528	26.656296	2.62962963	76.76741	1.9881481	0.25925926	4.1170370	311.17926
##	124	28.857820	4.57503949	65.57188	5.0268562	0.29067930	1.8230648	370.61137
##	592	27.770445	1.79340029	80.25681	2.6872310	0.37302726	2.0961263	302.85222
##	586	25.382476	2.04867872	69.35049	2.5034771	0.21140473	2.5368567	291.68428
##	601	20.682216	0.55830904	73.00875	2.9868805	0.20699708	3.2361516	295.34257
##	612	23.727685	0.62329803	66.40091	3.2042360	0.10438729	3.0590015	288.00605
##	61	38.071301	1.91087344	68.53476	3.8823529	0.42602496	3.0641711	397.41355
##	216	31.061189	2.97902098	69.40035	3.6940559	0.12062937	2.3041958	376.13112
##	462	23.986003	1.94401244	69.73561	2.3716952	0.24416796	2.9657854	308.87092
##	583	19.011976	1.08532934	49.15719	2.7994012	0.35479042	2.1661677	251.91617
##	346	29.549770	3.53445636	62.22205	2.9555896	0.30321593	2.3736600	338.23583
##	458	19.291994	1.30298273	70.40659	2.7017268	0.23076923	2.2637363	279.72527
##	630	8.091603	0.00000000	29.04580	0.9923664	0.06870229	1.1145038	106.48473
##	510	18.795356	1.33671988	46.54136	2.1059507	0.46153846	1.7634253	249.76343
##	613	23.232404	1.19521912	54.79947	2.3691899	0.16998672	2.6759628	239.76228
##	635	11.531599	0.11895911	26.74349	1.8364312	0.13754647	1.3754647	106.43866
##	429	18.918103	2.07902299	51.39368	2.0344828	0.21408046	2.0402299	267.01006
##	339	24.262222	3.05481481	66.00000	2.5762963	0.67111111	3.9362963	311.60148
##	354	26.716370	1.92544571	63.03890	2.9416532	0.26418152	2.8460292	340.96759

##	400	20.888048	2.54765507	47.83812	2.6036309	0.10741301	3.0983359	291.39334
##	141	30.708772	3.64561404	68.78246	4.2298246	0.56140351	2.8771930	398.38421
##	567	26.800000	1.42480620	57.17364	2.5674419	0.15658915	3.2449612	310.15194
##	91	36.402214	4.73431734	59.83948	2.9132841	0.12177122	2.9741697	395.13653
##	251	27.509573	5.00000000	48.98675	3.8144330	0.55228277	2.3873343	301.06480
##	171	30.566288	1.82765152	69.20833	3.4734848	0.30303030	2.3011364	408.11364
##	347	30.454392	2.48648649	69.76858	3.5861486	0.50000000	4.3175676	348.60473
##	319	33.279346	3.97325409	57.66716	2.9687964	0.66716196	2.7176820	331.64487
##	372	25.539580	2.10339257	50.91599	3.4329564	0.17609047	2.4442649	329.07108
##	320	30.430177	1.78491172	73.76404	3.5473515	0.31942215	3.6982343	345.08026
##	428	23.683507	2.42942051	58.41605	2.0133730	0.08915305	3.0386330	318.10550
##	566	23.166667	0.35267857	94.03423	3.3482143	0.21279762	3.5029762	326.27976
##	359	22.480000	0.73440000	58.64160	2.9360000	0.31520000	2.4320000	313.20640
##	547	23.202096	2.08832335	61.95060	2.4461078	0.46856287	2.6946108	271.76647
##	159	31.430723	3.31927711	71.42922	4.1189759	0.24849398	2.1475904	346.15813
##	77	37.277778	2.39426523	63.53405	2.0035842	0.07526882	3.3548387	378.87993
##	108	30.318264	3.46292948	49.80651	3.8318264	0.25497288	2.7305606	354.82821
##	624	10.790514	0.44664032	26.22134	1.1976285	0.22529644	1.1146245	107.93281
##	76	34.609665	3.62825279	77.15428	2.5223048	0.41821561	1.8234201	424.00743
##	653	27.556157	0.67523681	60.92828	3.7510149	0.18538566	4.4776725	280.42625
##	117	25.568504	2.81889764	55.19213	3.3511811	0.34330709	2.1055118	310.80472
##	207	28.925926	2.69887279	53.16425	4.6731079	0.28502415	3.4460548	307.80676
##	460	28.837881	2.69502408	73.97111	3.8426966	0.04815409	3.3178170	333.62119
##	442	24.235385	2.40769231	67.02615	2.8292308	0.36769231	2.6338462	304.58923
##	370	28.072347	2.95819936	71.17203	2.3456592	0.38906752	2.9083601	327.58842
##	152	28.654762	2.51700680	55.97449	4.0578231	0.16156463	2.0748299	334.64116
##	257	27.572800	3.08960000	57.30720	2.9472000	0.00000000	2.9504000	342.76960
##	484	23.966565	1.96960486	66.92857	2.5030395	0.33130699	3.5927052	300.80091
##	574	24.549254	0.79850746	86.10746	2.8537313	0.19104478	3.6134328	301.06269
##	554	25.158147	1.33865815	53.49840	3.0990415	0.50958466	2.8354633	287.61182
##	392	29.413969	2.33901193	87.58092	3.5383305	0.57410562	2.5502555	397.58944
##	192	26.504702	3.64890282	59.29154	3.2507837	0.12695925	2.1536050	341.19122
##	265	25.523333	2.15833333	68.87500	2.9766667	0.23833333	3.2383333	358.29000
##	275	31.281399	1.94276630	50.74245	3.1621622	0.17329094	3.4594595	302.82830
##	286	32.222591	3.60465116	52.52492	3.5415282	0.37707641	3.4501661	334.05648
##	134	30.057632	4.16510903	74.22118	3.0404984	0.09968847	2.2196262	344.42835
##	69	32.592920	3.22477876	69.69381	1.8601770	0.28672566	4.8867257	383.25310
##	155	34.667304	2.52198853	77.17400	3.5544933	0.26003824	2.7877629	407.64245
##	7	30.170068	1.53571429	50.00000	3.1785714	0.27210884	2.8707483	346.26531
##	436	29.075410	3.21475410	77.03279	2.2754098	0.07540984	4.6442623	343.38361
##	389	25.084485	1.74347158	60.34101	3.2657450	0.56067588	1.8940092	301.56068
##	490	25.646526	2.06646526	74.53776	4.5709970	0.23111782	4.1253776	350.71903
##	673	22.370725	2.27222982	53.95759	2.7879617	0.03967168	2.0615595	243.29412
##	88	32.876307	1.13240418	72.57840	2.4094077	0.24738676	4.6655052	418.53659
##	287	28.317411	3.51617874	64.98767	2.9537750	0.66255778	1.2742681	346.36672
##	414	24.838897	2.67053701	64.60232	2.9854862	0.14223512	4.2975327	321.98694
##	219	25.889968	2.94498382	64.18447	2.2119741	0.16019417	1.9012945	326.76052
##	21	33.758123	2.03429603	71.45487	3.1859206	0.32671480	3.8880866	358.83574
##	471	20.224784	1.82420749	44.27089	1.7997118	0.34438040	1.9639769	228.07781
##	513	25.488889	1.85629630	59.34815	3.2651852	0.13629630	2.1896296	300.25481
##	232	22.296238	2.77742947	52.09718	2.3557994	0.31974922	1.8197492	299.19279
##	250	24.635093	3.02484472	56.44720	2.3726708	0.49534161	3.0745342	298.95652
##	292	32.745480	4.03337969	64.48261	4.2086231	0.16968011	2.7162726	336.43533
##	659	23.972662	0.77841727	77.18705	3.2172662	0.48345324	2.3841727	266.97842

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## 164 30.450262 4.20069808 51.56545 2.5392670 0.42059337 2.0924956 335.91274
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## 244 33.316342 4.61619190 65.37481 3.8665667 0.27436282 3.0224888 362.83958
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## 4 33.537313 3.62354892 63.33831 2.2620232 0.35489221 2.6119403 346.62687
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## 473 23.062794 1.20408163 58.41287 2.6875981 0.50392465 3.8414443 295.08634

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##	457	29.013825	2.69431644	73.65899	2.7972350	0.03379416	3.8725038	339.99539
##	366	21.344624	2.32695140	54.70545	1.8851252	0.50368189	2.6362297	277.36230
##	515	22.711429	2.58428571	74.29714	1.5557143	0.33000000	2.6000000	307.12286
##	410	26.510269	2.50710900	86.07425	2.9146919	0.18641390	3.6287520	357.17220
##	426	27.480253	3.66350711	65.22749	2.0394945	0.07109005	2.4328594	312.20221
##	564	29.841410	1.49779736	82.16887	3.0499266	0.41997063	4.6740088	341.75184
##	174	29.846281	3.07933884	61.07603	3.7305785	0.17851240	3.2231405	370.12397
##	596	26.250733	1.43988270	60.76393	3.8460411	0.23753666	2.8211144	292.38123
##	391	25.878981	1.92038217	67.34076	3.4904459	0.49363057	3.3041401	316.30892
##	273	30.140777	2.37864078	61.64563	3.0970874	0.53559871	3.2637540	336.44660
##	206	25.226300	2.74770642	53.19572	4.1773700	0.14678899	2.7217125	345.69419
##	215	22.703448	1.35862069	57.07414	3.8500000	0.33620690	1.6741379	315.87414
##	412	23.406393	0.91628615	51.66667	2.4200913	0.36225266	2.6286149	267.89346
##	360	29.562500	4.38095238	79.20833	3.2276786	0.20684524	3.2559524	342.22768
##	345	23.370016	1.47527911	62.37161	2.5837321	0.22488038	2.3907496	360.21691
##	568	23.346003	0.96985583	60.76016	2.7745740	0.12975098	3.7051114	262.68807
##	603	26.902405	0.68458274	81.12871	2.2305516	0.21782178	3.3451202	307.88119
##	253	25.907246	5.28985507	58.35217	2.7550725	0.23768116	2.1666667	315.27681
##	349	25.110930	3.04567700	69.27243	3.7063622	0.34094617	1.2398042	348.76020
##	593	23.320479	1.23670213	54.41755	2.3630319	0.29787234	2.4268617	263.40957
##		ERApplus	FIP	WHIP	H9	HR9	BB9	S09
##	617	168.80796	4.233633	1.336963	8.206367	1.0850187	3.840075	9.217978
##	173	108.66768	4.514512	1.524445	9.829573	1.0850610	3.883994	6.816311
##	240	147.28007	3.850991	1.244950	8.185220	0.9037736	3.030189	7.770597
##	168	93.31179	4.748611	1.456583	9.346204	1.1516963	3.767851	6.038288
##	36	124.34706	4.180079	1.375940	8.608929	0.8809524	3.789286	7.356548
##	234	132.75725	4.279891	1.305053	8.552536	0.9483696	3.176268	6.404529
##	129	96.75745	4.274873	1.493257	9.172101	1.1072464	4.267210	8.257246
##	29	106.76103	4.413431	1.526912	9.780882	1.0856209	3.926961	7.605556
##	657	152.29372	3.720433	1.159310	6.834777	0.9286089	3.604593	9.741732
##	166	133.23194	4.260741	1.327795	8.306464	0.9163498	3.636692	6.585932
##	472	142.26554	3.693545	1.262885	8.241301	0.9159350	3.131220	8.606341
##	407	116.07189	3.621977	1.307108	8.565843	0.7534884	3.205959	7.840552
##	46	99.07183	4.667505	1.521448	9.854064	1.2327032	3.822495	7.344612
##	528	131.88967	3.937377	1.301682	8.260385	1.0974833	3.456066	9.163800
##	124	121.46279	4.052133	1.332235	8.804265	0.9606635	3.181991	7.197156
##	592	117.34721	4.357877	1.300884	7.997704	1.3477762	3.698996	9.698852
##	586	115.18916	4.261627	1.347492	8.639082	1.2253129	3.477330	9.084562
##	601	127.48495	4.001038	1.296168	8.820517	1.2406181	2.847226	9.461879
##	612	113.91831	4.981301	1.507743	9.496672	1.5452345	4.069289	8.934644
##	61	108.60606	4.909519	1.426102	8.683601	1.1495544	4.152228	6.327094
##	216	145.21329	4.071801	1.275787	8.031469	0.9791958	3.449650	7.441434
##	462	134.72006	3.273033	1.161947	7.558320	0.6741835	2.904044	8.666252
##	583	133.68595	4.309746	1.372552	8.957784	1.1136228	3.395359	7.845060
##	346	116.03982	3.993905	1.395960	8.791577	0.8067381	3.791884	7.449005
##	458	134.14619	3.467881	1.252746	8.266562	0.8621664	2.999372	9.464835
##	630	154.08344	3.958282	1.263118	8.208015	1.2580153	3.178626	10.060687
##	510	123.79681	4.502961	1.379347	9.188824	1.2236575	3.226996	7.228302
##	613	115.02701	4.746839	1.419377	8.678220	1.4073041	4.089110	9.065471
##	635	120.98479	4.599294	1.401245	7.911152	1.2327138	4.699628	9.800000
##	429	99.02730	3.935388	1.335356	8.787644	0.9158046	3.226580	7.154167
##	339	127.68889	3.946622	1.314299	8.642815	1.0035556	3.201481	7.873778
##	354	119.52724	4.048817	1.299950	8.384603	0.8758509	3.320746	6.709400
##	400	113.20763	4.381967	1.315776	8.919818	1.0996974	2.913616	6.393797

##	141	120.18421	3.860140	1.365140	9.054035	0.7361404	3.221228	6.253333	2.293825
##	567	108.72248	4.860822	1.535076	9.843256	1.3099225	3.991628	7.328682	2.464682
##	91	117.68939	4.423192	1.521821	9.993173	0.9140221	3.693173	6.098339	1.851397
##	251	102.54934	4.863667	1.471270	9.205155	1.1756996	4.040501	6.728571	1.863240
##	171	146.70455	3.931420	1.247937	8.221780	0.9407197	2.991856	7.072917	2.724451
##	347	143.37197	4.127601	1.292617	8.007264	0.9773649	3.651182	7.671622	2.329202
##	319	102.02372	4.371114	1.426645	8.695097	0.9190193	4.157058	7.014710	1.813908
##	372	94.84427	4.431131	1.455341	9.538934	1.0168013	3.545719	6.312763	2.137318
##	320	126.41196	4.467368	1.328117	8.247512	1.2508828	3.688764	8.210273	2.677368
##	428	121.56464	3.804948	1.290398	8.695542	0.9499257	2.901486	7.454086	2.904742
##	566	156.76653	3.175536	1.093652	7.283780	0.9245536	2.577679	10.383333	4.662655
##	359	120.60019	3.852864	1.326149	8.637440	0.8305600	3.302240	7.378240	2.548640
##	547	132.26365	4.276317	1.370313	8.905988	1.2330838	3.430240	8.688024	2.915714
##	159	137.43524	4.096657	1.268843	7.879217	0.9597892	3.535693	7.573343	2.367274
##	77	97.39185	5.263871	1.599410	9.645878	1.3901434	4.759498	6.863082	1.653710
##	108	90.96383	4.686022	1.568852	10.165099	1.0408680	3.980651	6.007957	1.716058
##	624	130.55336	4.585810	1.459237	8.309881	1.1913043	4.823320	9.453360	2.643628
##	76	124.10967	4.477528	1.410913	8.516171	1.1141264	4.182156	7.877695	2.144512
##	653	104.28363	4.618512	1.430250	8.627199	1.2299053	4.240189	8.587145	2.258444
##	117	113.33850	4.224425	1.371860	8.903465	0.9781102	3.446299	6.771339	2.138084
##	207	109.07246	4.564638	1.539715	9.832206	1.1219002	4.018680	7.208213	2.045288
##	460	128.17391	3.537929	1.294311	8.116854	0.7502408	3.524719	8.800642	2.876564
##	442	99.87692	3.697662	1.340309	8.959077	0.9226154	3.117077	8.834615	3.212038
##	370	116.01286	3.595241	1.309186	7.970418	0.7434084	3.812379	8.403698	2.407572
##	152	106.72279	4.493061	1.447486	9.495408	1.1705782	3.528912	7.017857	2.133214
##	257	105.36000	4.601328	1.537558	9.812160	0.9414400	4.034400	6.642080	2.032928
##	484	119.38081	3.831444	1.280874	8.439210	1.0691489	3.094681	8.934954	3.066027
##	574	128.07793	3.442836	1.213878	7.478060	1.0302985	3.440896	11.077612	3.516190
##	554	120.31470	4.735128	1.446104	9.008307	1.2674121	4.011821	7.854792	2.284564
##	392	152.51319	3.540341	1.233704	7.662692	0.8177172	3.447871	9.022147	3.213354
##	192	119.05486	4.407100	1.328119	8.950157	1.1912226	2.997806	6.845455	2.707684
##	265	127.59667	4.388233	1.349983	8.877667	1.0588333	3.271000	7.202500	2.621067
##	275	121.58665	4.527695	1.448501	8.791415	0.8499205	4.235135	6.672973	1.715533
##	286	98.93854	4.700332	1.559480	9.589535	0.9845515	4.440199	6.616611	1.688538
##	134	126.78037	3.923894	1.366977	8.664019	0.9836449	3.643458	8.165421	2.522850
##	69	109.64636	4.479664	1.410442	9.225133	1.1695575	3.458584	7.019469	2.270372
##	155	137.98662	4.186883	1.341119	8.209560	0.9768642	3.868834	7.598088	2.205143
##	7	107.17517	4.691667	1.526066	10.084524	1.1010204	3.659014	6.106803	1.728861
##	436	92.05741	3.738705	1.364426	8.590328	0.9580328	3.670328	9.104590	2.698672
##	389	126.98501	4.128571	1.342885	8.655300	1.0649770	3.436713	7.977573	2.815511
##	490	151.83883	3.356027	1.193136	7.969940	0.6229607	2.773112	7.911329	3.144091
##	673	91.35304	4.932886	1.430981	8.899316	1.5484268	3.970451	8.918878	2.497143
##	88	118.56794	4.642456	1.479280	9.900348	1.2780488	3.407666	6.932578	2.393850
##	287	137.57935	4.504160	1.330322	8.593066	1.2442219	3.402928	7.501695	2.466641
##	414	114.00000	4.008157	1.305528	8.498839	1.0716981	3.248766	8.130189	2.766726
##	219	121.73463	3.663900	1.328830	8.663107	0.8110032	3.285113	7.623301	2.904832
##	21	95.04874	4.727690	1.571558	9.775271	1.1796029	4.383755	7.561913	1.939765
##	471	101.81389	4.407133	1.447648	9.130115	1.1256484	3.899856	7.772190	2.226752
##	513	128.31111	4.152844	1.371753	8.935259	1.0128889	3.410963	7.809037	2.486702
##	232	130.21787	4.866708	1.482516	10.045141	1.3471787	3.309248	6.535580	2.321306
##	250	130.92391	4.337205	1.362365	8.815839	1.0701863	3.454658	7.214286	2.377671
##	292	108.60083	4.445202	1.394729	8.761196	1.0705146	3.779416	7.407650	2.243588
##	659	145.79434	4.066576	1.261504	7.404460	1.2117986	3.940288	10.625612	3.131609
##	164	112.03490	4.480750	1.450874	9.288133	1.0102967	3.770157	6.158290	1.759442

##	521	121.89526	3.932008	1.253486	8.105970	0.9321574	3.181004	7.865265	2.948806
##	244	123.78411	4.251754	1.453534	9.159370	0.8803598	3.934783	7.395502	2.189445
##	584	101.14642	4.462779	1.415439	9.311702	1.3480053	3.424468	8.755984	2.986618
##	79	97.15609	5.212744	1.546245	9.193825	1.3636364	4.725557	7.227273	1.778027
##	122	128.64551	4.710248	1.336933	8.482198	1.2645511	3.564241	6.809598	2.164861
##	652	108.45104	4.563224	1.428368	8.810511	1.2748580	4.047159	8.704545	2.300144
##	4	101.17910	4.604594	1.464081	9.166169	1.1893864	4.040962	7.425539	2.274892
##	660	111.12089	4.396368	1.307512	8.428654	1.3518090	3.338205	8.873806	3.128900
##	644	88.83714	4.960413	1.527132	9.891609	1.4459422	3.844429	7.873177	2.235690
##	433	140.34611	3.373732	1.196882	7.791069	0.6194577	2.978628	7.669537	3.465281
##	618	109.71217	5.320034	1.688897	10.403425	1.7643836	4.797260	9.757192	2.451349
##	600	117.58890	4.581667	1.346664	8.372533	1.4636000	3.753867	9.621867	2.967044
##	305	105.02299	4.177938	1.430482	9.315814	0.9441860	3.551783	7.095814	2.480713
##	236	89.64763	5.124535	1.596266	10.209921	1.3466142	4.157638	6.611496	1.812630
##	448	109.42954	4.010559	1.363785	8.290678	1.0079661	3.983898	8.943559	2.489291
##	540	145.77221	3.621404	1.171851	7.554155	1.1385387	3.005014	10.066762	4.482906
##	20	101.89425	4.332799	1.466124	9.719440	0.9214619	3.489580	6.189269	2.238373
##	325	142.47496	3.877367	1.329509	8.013247	0.7933764	3.971890	8.018578	2.215880
##	100	126.81042	4.450446	1.292688	8.368954	1.2351630	3.254202	7.207547	2.727101
##	111	97.14820	4.453175	1.377795	8.899825	1.2703509	3.498070	7.740702	2.436766
##	637	155.64512	4.742838	1.328149	7.945608	1.2750000	4.008446	8.321284	2.701290
##	323	104.05673	4.591669	1.481151	9.079092	0.9952998	4.254457	6.580389	1.692463
##	591	117.81684	4.783271	1.419562	8.617934	1.3493544	4.159541	8.485940	2.286665
##	223	103.42857	4.433295	1.525609	10.137013	1.0152597	3.591558	6.298052	1.896269
##	60	93.56359	5.611282	1.681106	10.652513	1.3778163	4.483016	5.336915	1.287088
##	507	108.68733	4.078995	1.346069	8.968603	1.0414443	3.156829	7.838619	2.665024
##	394	125.25601	3.672801	1.308431	8.714948	0.9424399	3.075945	8.490722	3.060086
##	5	107.34545	4.564473	1.504105	9.625455	1.0607273	3.897273	6.437091	1.787545
##	537	108.18514	3.949119	1.311678	8.315125	1.2743025	3.485022	10.395742	3.487404
##	59	136.92929	3.741497	1.390433	8.875250	0.8149701	3.642116	8.458084	2.749341
##	514	96.16810	4.319612	1.430056	9.727482	1.2677698	3.120576	8.077698	2.954447
##	397	128.29790	3.697949	1.271076	7.523054	0.7064371	3.933084	8.393413	2.359701
##	260	114.04132	4.501372	1.428228	9.100496	0.9651240	3.770248	6.797851	1.907041
##	201	111.18613	4.138978	1.466907	9.452012	0.8515480	3.740248	6.573684	2.020025
##	276	143.28788	4.036203	1.287674	8.287285	0.7711340	3.291237	6.917869	2.229280
##	664	108.06066	4.594178	1.383445	8.567249	1.4056769	3.894614	9.403493	2.881645
##	619	130.66917	4.551492	1.363411	7.840323	1.3737903	4.421371	9.968952	2.948790
##	534	102.46847	4.837538	1.417302	8.761411	1.4486486	4.002402	8.556006	2.387793
##	417	154.02778	3.695159	1.283787	8.335503	0.9534394	3.205004	8.561408	3.751144
##	262	127.30492	4.336459	1.417207	9.341967	0.9867213	3.428689	7.076885	2.307934
##	598	134.25272	3.998430	1.158141	7.605233	1.2104668	2.842008	9.320368	3.760624
##	255	157.98042	4.052724	1.244463	7.924307	0.8252855	3.282219	7.368842	2.644649
##	71	101.50197	5.359311	1.740563	10.637402	1.2214567	5.022638	6.333465	1.387699
##	191	116.64410	4.341111	1.373363	8.774826	1.0402778	3.592014	7.021181	2.043802
##	182	94.06772	5.089575	1.609033	9.940000	1.2313386	4.540787	6.437008	1.701087
##	39	120.28699	4.196916	1.398139	8.762745	0.9270945	3.820143	7.500713	2.158485
##	597	113.12339	4.780732	1.370736	8.422503	1.4696405	3.917044	9.105726	2.732347
##	647	127.82171	4.070690	1.402058	8.515586	1.0674483	4.111448	9.992138	2.812490
##	383	127.97927	4.180225	1.243453	8.169775	1.2157168	3.024870	7.659240	3.484214
##	504	123.41498	4.156998	1.405589	8.745879	0.9531882	3.891913	8.114308	2.525652
##	183	97.24747	4.789799	1.462396	9.484289	1.2731777	3.683974	6.491181	2.042104
##	89	114.72714	4.501745	1.399000	8.319721	1.0954625	4.271204	7.994415	2.034727
##	473	108.78910	4.416829	1.377215	9.131240	1.2654631	3.269074	7.756201	2.700518
##	90	122.83978	4.369190	1.422081	8.869245	0.9710866	3.925967	7.056906	1.941510

##	424	177.13250	3.427776	1.202275	7.740407	0.8738540	3.080815	8.909168	3.222763
##	252	139.13767	4.464176	1.394717	8.811957	0.9946301	3.736673	7.221609	2.093712
##	496	129.01061	4.315682	1.347450	8.608939	1.1251515	3.522879	7.888788	2.735952
##	463	117.02272	3.588069	1.128730	7.588854	0.7623234	2.572527	7.302826	3.135830
##	535	121.44585	4.140436	1.375681	8.875809	1.1313643	3.509705	8.636850	3.365305
##	199	100.11643	4.755220	1.580459	9.948142	1.1125000	4.267399	6.528885	1.685318
##	87	132.23322	4.874027	1.480463	8.738758	1.0699664	4.591779	6.584564	1.582177
##	197	153.66756	3.753233	1.170005	7.706815	0.7573693	2.828051	6.754834	2.613033
##	291	143.20988	4.155556	1.322313	8.942593	1.0316358	2.958025	6.811420	2.471273
##	432	101.28344	4.013997	1.458143	9.200159	0.8902866	3.940446	7.892994	2.545314
##	336	109.16304	4.170699	1.439011	8.797050	1.0299689	4.147516	8.689286	2.305481
##	651	130.09279	4.207346	1.297657	8.004735	1.2482066	3.673745	9.436011	2.797391
##	157	114.96533	4.730544	1.480249	9.997734	1.2191843	3.318580	6.119335	1.969116
##	331	93.49135	4.903256	1.578379	9.551873	1.0714697	4.668444	6.369452	1.478790
##	571	140.66789	3.829501	1.290450	7.984349	1.0063712	3.632548	9.573961	2.809917
##	74	110.87790	4.817811	1.496072	9.609462	1.2057514	3.854731	6.725417	1.883915
##	640	179.91901	3.864516	1.179581	7.582796	1.0831541	3.040860	9.292473	3.825075
##	524	107.76944	4.410634	1.384119	8.948223	1.3146832	3.502628	8.563679	2.816789
##	72	102.69005	4.638520	1.553449	9.458211	0.9803252	4.527480	6.930569	1.578817
##	447	99.13659	4.182400	1.480774	9.197163	0.7780178	4.129207	7.190360	1.975203
##	670	145.20376	3.671775	1.154534	7.446898	1.0437229	2.951948	9.557864	3.729962
##	64	130.63653	4.155282	1.350764	8.019435	1.0332226	4.133555	8.685216	2.197991
##	363	108.06868	3.983790	1.370700	8.527245	0.9401826	3.809285	8.179909	2.405556
##	399	99.58902	3.887774	1.437381	9.053709	1.0109792	3.885608	9.176113	2.569733
##	115	133.02677	3.645373	1.306419	8.727725	0.8544933	3.021989	8.054876	3.256061
##	650	117.30446	4.554831	1.397723	8.271930	1.4407557	4.302969	10.167206	2.778806
##	493	115.34524	4.164933	1.362253	8.831893	1.0523100	3.420119	8.072876	2.765139
##	66	108.51937	4.423627	1.442215	9.356866	0.9401408	3.631514	6.232042	1.935458
##	421	122.58196	3.830331	1.411389	9.449023	0.8622556	3.253684	7.305865	2.418075
##	148	106.00308	4.889661	1.552533	9.337904	1.2546995	4.639908	7.105085	1.678136
##	559	96.58759	4.697807	1.517951	9.550153	1.2450920	4.103988	8.017178	2.246634
##	385	126.39458	3.842786	1.300050	8.275904	0.8293675	3.416416	7.257530	2.455542
##	302	96.62889	4.747286	1.562435	9.641842	1.0156704	4.406300	6.562520	1.674450
##	437	175.23256	3.303705	1.231009	8.169767	0.6311628	2.911938	7.966357	3.657887
##	452	183.01581	3.496917	1.235274	8.000163	0.6911909	3.107341	8.026591	2.881713
##	290	113.52476	4.569984	1.401377	8.733773	1.1176277	3.878254	6.967216	2.102191
##	226	112.67183	4.296276	1.406268	9.146388	1.0589085	3.504494	7.555698	2.257877
##	621	148.70554	4.512939	1.299259	7.453509	1.4828947	4.261842	10.975877	3.241191
##	53	143.96167	4.382195	1.339409	8.685889	1.0310105	3.385714	6.734495	2.578293
##	154	123.11340	4.010292	1.337926	8.030756	0.9864261	3.988660	8.520619	2.438076
##	667	153.59248	3.671840	1.139576	7.535480	0.9515112	2.711695	8.479763	3.511211
##	301	144.93161	4.154590	1.264607	7.623607	0.9588525	3.756885	7.634754	2.193525
##	497	122.29105	3.829746	1.188623	8.284311	1.0949287	2.425198	8.156101	4.232471
##	309	127.28231	4.414633	1.412353	8.196256	1.0117005	4.511544	8.105460	2.176660
##	585	128.77669	4.389586	1.284945	8.252486	1.2897790	3.293508	8.568232	3.450205
##	409	119.23653	3.889506	1.276452	8.456287	0.9821856	3.039521	7.850299	2.995808
##	373	98.92899	3.876568	1.412972	9.060355	0.8488166	3.643639	7.824704	2.225514
##	67	104.49254	4.887977	1.537096	9.349088	1.1276949	4.471310	6.708624	1.616468
##	614	107.53324	4.862373	1.470586	9.296928	1.5281272	3.943204	9.229550	3.064195
##	322	118.82770	4.438100	1.399541	8.847665	1.0661836	3.744122	7.393881	2.330676
##	636	123.72873	3.856619	1.278047	8.184173	1.1517986	3.317266	10.091007	3.767993
##	202	113.33648	4.436148	1.417854	8.888522	1.1201258	3.861006	7.171698	1.987752
##	582	120.78072	3.822210	1.228831	7.708112	0.9959441	3.380559	9.045455	2.969854
##	405	112.67752	3.835907	1.297584	8.237847	0.9080781	3.416080	8.198197	2.567225

##	218	108.43393	4.346297	1.429186	8.998695	0.8928222	3.853670	6.182545	1.611843
##	68	128.25768	4.510751	1.481227	8.645563	0.9672355	4.680717	7.717406	1.752543
##	303	146.66257	3.863053	1.243566	7.776158	0.7679245	3.414408	7.471355	2.442521
##	310	123.67764	4.119532	1.410648	9.050780	1.0322357	3.656672	8.095667	2.492010
##	544	95.93014	4.468041	1.480621	9.335753	1.3152055	4.001781	9.207534	2.809265
##	238	102.83701	4.707521	1.475874	9.201019	1.1376910	4.064686	7.292190	2.190170
##	615	116.04965	5.057038	1.604535	9.645385	1.5084615	4.806923	9.301923	2.302407
##	181	84.86950	5.196904	1.528150	9.812898	1.4578149	3.928983	6.223369	2.021320
##	562	100.70115	4.164545	1.457526	8.932308	1.0269930	4.188392	9.143077	2.404501
##	341	102.47085	4.074126	1.469088	9.714948	0.8965620	3.521226	7.072945	2.784187
##	446	121.48834	3.413219	1.297179	8.272532	0.6243205	3.392704	8.455937	2.746581
##	137	110.66447	4.668553	1.430551	8.479112	1.1172697	4.391283	6.790954	1.739901
##	374	171.08849	3.684035	1.288721	8.201595	0.8349282	3.396810	8.215311	3.059511
##	672	137.14213	4.225244	1.253298	7.790115	1.2544413	3.498567	9.443840	3.257970
##	23	128.35846	4.267886	1.434792	9.466728	0.9336397	3.452941	6.304412	2.116415
##	213	138.87276	3.914534	1.245253	8.183871	0.8483871	3.020968	6.625269	2.732814
##	443	128.61260	3.243533	1.262897	8.013407	0.5746057	3.375710	8.698423	2.867950
##	381	114.67460	3.823381	1.296430	8.485238	0.8761905	3.172857	7.516984	2.726381
##	212	125.91203	4.172478	1.385352	8.363734	0.9619390	4.100718	7.573429	2.102837
##	494	147.73162	3.461342	1.284306	8.408863	0.7168586	3.133492	8.408566	2.939940
##	542	131.66303	4.276152	1.374579	8.502669	1.1842697	3.869242	9.135674	2.509796
##	280	107.82236	5.003201	1.572358	9.622205	1.1169985	4.542726	6.455283	1.538377
##	431	128.93432	3.672709	1.234251	8.232348	0.9057471	2.874713	7.772742	2.986158
##	18	120.19640	4.380457	1.488103	9.302610	0.9621533	4.099674	7.333442	1.973073
##	312	117.39938	3.954628	1.363280	8.939319	0.9840557	3.347214	7.919195	2.973080
##	278	121.52779	3.972475	1.326323	8.866337	0.9399340	3.084323	7.605776	2.787013
##	556	134.01233	4.161787	1.315744	8.637442	1.2109399	3.206471	8.843451	3.131741
##	180	110.28905	4.828200	1.421693	9.106952	1.3909091	3.691979	6.977718	2.004082
##	209	134.81274	3.906415	1.270017	8.317923	0.9943049	3.094975	7.930988	2.798987
##	19	83.89966	4.540102	1.548468	9.744898	1.0420068	4.201701	7.275850	2.007704
##	177	115.19707	4.328811	1.483822	8.919218	0.9011401	4.422476	7.420847	1.822296
##	150	138.41099	3.990928	1.353153	8.133062	0.8884365	4.035342	8.177199	2.483225
##	476	110.74473	4.090366	1.366534	8.644070	0.9748170	3.669546	8.100000	2.448814
##	109	124.63668	4.367407	1.332325	8.679894	1.2793651	3.321340	8.113580	2.704497
##	470	121.56601	4.067767	1.329086	8.708006	1.0606742	3.258427	8.005899	2.532314
##	627	177.47867	3.540356	1.070511	7.054045	0.9161812	2.579288	8.898058	4.706537
##	93	101.26592	4.814220	1.627755	9.265764	0.9487261	5.389490	7.232006	1.456877
##	445	137.00829	3.637160	1.290704	8.742290	0.8329771	2.874046	7.897863	3.472890
##	84	94.70280	5.204353	1.557365	9.823252	1.4361888	4.201923	6.961014	1.783741
##	456	97.74119	3.958576	1.360720	9.557887	0.8908116	2.673660	6.535222	3.170551
##	382	111.43520	4.184617	1.275668	7.762333	0.9865000	3.733500	7.282500	2.322272
##	50	134.19118	4.356618	1.362925	8.480147	1.0319853	3.777390	7.423162	2.124528
##	416	115.89291	4.100819	1.285019	8.711181	1.1530709	2.856063	7.793701	3.083251
##	92	97.82812	5.042587	1.544825	9.488368	1.3260417	4.424826	7.119965	1.670670
##	641	117.57558	4.962197	1.443292	8.262500	1.3821970	4.736364	8.908712	2.165636
##	530	118.99388	4.676590	1.378040	8.902752	1.3269113	3.500153	7.689297	2.340367
##	247	128.40102	4.281912	1.412503	8.857868	0.9869712	3.874788	7.542809	2.540404
##	196	101.51910	4.808646	1.464057	9.148958	1.2390625	4.019444	6.846875	1.873108
##	314	117.09256	4.383976	1.428608	9.111988	1.0940819	3.751138	7.475721	2.163794
##	665	103.03097	4.594067	1.402800	8.330470	1.2276510	4.278121	8.852215	2.475904
##	594	113.02620	4.957886	1.475911	9.442005	1.5758808	3.841463	8.755420	2.624632
##	379	130.88629	3.199393	1.235192	7.451402	0.4934579	3.674299	8.408100	3.353925
##	272	116.21733	4.244043	1.422599	9.220517	0.8000000	3.569605	6.502888	1.895957
##	96	109.73394	4.538440	1.422183	8.460734	1.0431193	4.337064	7.407890	1.788312

##	351	153.18306	3.102738	1.166082	7.565658	0.7211800	2.929955	9.146596	4.063031
##	98	99.00633	5.011473	1.671763	10.738475	1.1831889	4.317504	6.297227	1.543308
##	264	111.31346	3.932875	1.372164	8.900459	0.8478593	3.459480	8.005963	2.492202
##	506	102.59856	4.445453	1.473765	9.606187	1.2066187	3.657410	8.165036	2.419410
##	47	104.11322	4.600406	1.414071	9.083926	1.0084602	3.640271	6.083587	1.739543
##	172	98.57508	5.008650	1.488677	9.538264	1.3379421	3.838103	6.217524	1.767412
##	411	134.34576	3.755746	1.239388	8.435593	1.0538983	2.719322	8.351864	3.968339
##	151	141.85714	4.075806	1.369949	8.585407	0.9043011	3.754224	7.117358	2.610952
##	103	116.21026	4.107145	1.377403	8.962906	0.9458120	3.439316	7.418803	2.461150
##	378	130.21813	3.710415	1.282714	7.786636	0.6947773	3.757604	7.501536	2.320645
##	268	99.74559	4.269046	1.423296	9.105099	0.8347039	3.696711	6.823684	2.152237
##	11	118.57979	4.174965	1.312394	8.271777	1.0315331	3.550000	7.459408	2.195328
##	45	137.13255	4.114396	1.315107	8.463926	0.9521812	3.377181	7.273154	2.273591
##	365	114.12670	4.109201	1.320023	8.065008	0.9378582	3.814480	7.400000	2.104962
##	139	130.45607	3.875180	1.329747	8.280719	0.8750000	3.684314	7.606536	2.204316
##	575	166.42476	4.011014	1.227436	7.850676	1.0824324	3.208108	8.460811	2.907981
##	671	114.53304	4.388087	1.334963	8.548281	1.2653214	3.462481	8.312706	2.624878
##	604	128.44523	4.153850	1.260159	7.956417	1.1592384	3.411848	8.902539	3.393498
##	187	109.74908	4.294041	1.315163	8.853082	1.0672945	2.975342	6.238699	2.371897
##	16	88.92056	4.887648	1.640117	10.578193	1.1538941	4.177259	6.201869	1.567181
##	565	105.83112	4.495014	1.373351	9.037074	1.2806818	3.326136	7.825284	2.593701
##	607	114.20995	4.150511	1.305348	8.728652	1.3370213	3.013901	9.754468	3.716604
##	413	134.60404	3.592950	1.236658	7.804814	0.7905280	3.322671	8.340683	2.838835
##	185	105.14186	4.743660	1.564520	10.101751	1.1252189	3.988967	6.310333	1.775131
##	477	103.16962	4.259826	1.534212	9.749330	0.9599196	4.068767	7.806434	2.205080
##	500	108.99531	3.983342	1.394159	8.564037	0.8540107	3.994786	8.425668	2.459659
##	145	131.99694	3.580000	1.273423	8.113990	0.6063903	3.346114	6.659067	2.110423
##	337	118.64434	3.553216	1.355445	8.784359	0.7764499	3.430053	8.481722	2.726843
##	51	141.96583	4.021924	1.363964	8.176079	0.9118705	4.083273	8.240827	2.380827
##	406	113.13314	3.750839	1.262020	7.872504	0.9441389	3.502894	8.982634	2.930000
##	377	106.65541	4.012532	1.422968	9.181997	0.8725738	3.611955	7.222644	2.166892
##	116	130.36997	3.884827	1.254512	8.416436	0.9572664	2.861419	7.044291	2.577491
##	113	102.83333	4.439965	1.416424	9.331028	1.1280142	3.419858	6.635284	2.306418
##	311	129.41169	4.292328	1.332752	8.259844	0.9892188	3.728437	7.014844	2.027500
##	25	98.93585	4.719057	1.458911	9.221509	1.0920755	3.910189	6.255849	1.885679
##	2	148.89146	4.223043	1.354758	7.959786	0.9718861	4.258363	7.879181	2.104502
##	266	114.89981	4.302995	1.354690	8.662027	0.9160363	3.528593	7.277610	2.214412
##	560	129.06026	3.910516	1.278733	7.927403	1.0829268	3.610043	9.873314	3.046399
##	393	107.32631	4.194885	1.493772	9.946947	1.1089552	3.502442	7.895387	2.581750
##	454	151.39753	3.405978	1.334450	8.650693	0.6399076	3.357935	8.564561	2.929800
##	631	122.21754	4.498249	1.494630	8.592218	1.2354086	4.850584	10.343580	2.682163
##	355	138.31547	3.774992	1.188619	7.692343	0.9101072	3.005972	7.740276	2.956729
##	221	112.60069	4.416471	1.349109	8.622521	1.0860504	3.518824	6.820336	2.211741
##	576	111.90765	3.897507	1.322908	8.615172	1.0645119	3.294063	9.208707	2.986589
##	395	102.77667	4.064566	1.447570	9.544381	1.0192034	3.486629	8.068848	2.749842
##	633	230.36100	3.773195	1.170589	7.494606	1.0987552	3.058506	9.314523	4.020332
##	249	126.27803	4.192135	1.373949	9.160983	0.9215054	3.213825	6.664363	2.254716
##	277	106.44503	4.660520	1.404765	8.995867	1.0417333	3.651733	6.221600	1.992634
##	529	111.57370	4.398887	1.373160	8.554191	1.1713873	3.816185	8.398699	2.417991
##	459	143.57055	3.516816	1.094045	7.438308	0.8091211	2.425871	7.761028	3.878126
##	662	134.10703	3.965623	1.229402	7.636499	1.1930267	3.413798	9.871068	3.601350
##	451	97.95500	4.038667	1.359182	8.923333	0.9995000	3.307333	7.818000	3.033633
##	348	126.57949	4.106974	1.311357	8.231624	1.0316239	3.572991	7.666154	2.259434
##	526	153.55598	4.038243	1.255319	8.598305	1.2346687	2.715254	8.826965	3.503519

##	638	102.06426	5.394779	1.543112	9.040964	1.5220884	4.843373	8.495582	2.584016
##	35	105.17107	4.613789	1.509645	9.786703	1.1431694	3.791621	7.140255	1.972087
##	489	121.78791	3.988120	1.456227	9.566165	0.9416541	3.531880	8.131128	2.597981
##	654	119.09368	4.106766	1.297783	7.869139	1.1551929	3.812611	9.704896	3.081405
##	229	142.39610	4.289903	1.443760	9.674675	0.9550325	3.330519	6.767045	2.731786
##	646	87.44415	4.930109	1.482395	9.341040	1.4850889	4.006293	8.452941	2.413055
##	317	113.16024	4.553398	1.385826	8.707715	1.1400593	3.773887	7.211276	2.159332
##	425	137.69521	3.560987	1.259058	8.008600	0.7882957	3.306100	8.299372	2.935661
##	488	96.12528	4.364422	1.344370	8.950385	1.2650231	3.158089	7.773652	3.748290
##	99	109.99091	4.986636	1.571116	10.235636	1.2030909	3.916545	6.049455	1.964104
##	205	154.45122	4.128711	1.298239	8.058362	0.9724739	3.616202	7.363763	2.179118
##	533	117.30211	4.846026	1.379504	8.378006	1.3790323	4.047214	8.066276	2.532715
##	81	123.90545	4.751145	1.442505	8.612182	1.0790909	4.370909	6.713455	1.614364
##	1	131.28134	3.625056	1.302121	8.046828	0.7184701	3.675187	8.186567	2.749869
##	367	123.16316	3.958370	1.379988	8.472899	0.7873070	3.940480	7.484220	2.315792
##	283	122.28115	3.950990	1.350594	8.999681	0.9421725	3.152875	7.679553	2.694256
##	13	102.97645	4.519692	1.441553	9.658696	1.2014493	3.309058	6.709964	2.296123
##	208	115.17206	4.543850	1.338271	8.851618	1.1887564	3.193697	6.262010	2.008050
##	527	145.52709	3.505925	1.184494	7.672836	0.8650746	3.009104	9.111493	3.612124
##	161	176.75500	3.262750	1.127530	7.044000	0.6801667	3.089833	8.450667	3.155217
##	475	113.62139	3.855538	1.327549	8.563889	0.9631944	3.374653	8.673438	3.035534
##	512	117.96480	3.880000	1.360169	8.204444	0.8443056	4.019861	8.983333	2.446320
##	9	125.43605	3.749903	1.307589	8.216860	0.8116279	3.556008	8.286047	2.543973
##	420	131.09310	3.672295	1.151281	7.309952	1.0136437	3.037400	9.000321	3.042371
##	289	135.45259	3.555169	1.296339	8.400482	0.7179775	3.275923	8.236116	2.709535
##	195	102.70459	4.700322	1.499375	9.542313	1.1273792	3.955198	6.373499	1.732867
##	269	117.65083	4.926439	1.505459	9.300455	1.0957576	4.237879	6.598182	2.032433
##	335	116.97143	4.419702	1.425076	8.740496	1.0976860	4.089421	7.549917	2.034277
##	17	91.55342	4.574711	1.525629	9.201226	1.0143608	4.548336	7.402977	1.905324
##	297	94.91706	4.255299	1.414723	9.119296	0.9928025	3.617764	6.997550	2.279648
##	666	110.61350	4.198104	1.263191	7.898728	1.2283715	3.482061	9.571756	3.126915
##	623	110.78623	5.120254	1.410522	9.188406	1.6152174	3.516304	8.022464	2.596167
##	190	121.76126	4.112358	1.388343	9.533779	0.9556856	2.947492	6.511538	2.513207
##	295	141.60679	3.980127	1.357232	8.412222	0.7779365	3.802540	7.353810	2.132190
##	222	141.62714	4.130468	1.304901	8.521572	0.9160535	3.239130	6.686622	2.266639
##	501	225.64709	4.031091	1.292000	8.170744	1.0358678	3.442149	8.408926	2.628088
##	464	128.82193	3.499121	1.196947	7.633485	0.7810606	3.160152	8.712424	3.134249
##	140	125.21616	3.618687	1.298184	8.902222	0.7795960	2.787677	6.677172	2.709253
##	176	128.55576	4.069271	1.368124	9.165426	0.9500775	3.165116	6.593023	2.520620
##	558	125.47972	3.818420	1.340480	7.864498	0.7646555	4.201460	9.011455	2.316080
##	546	105.22707	4.346870	1.333105	8.686026	1.2525473	3.304803	8.390247	3.173959
##	102	98.92960	4.755560	1.438834	9.215162	1.2418773	3.738628	6.707040	2.318845
##	12	137.72348	4.246288	1.365472	8.775758	0.9784091	3.512121	7.033523	2.960087
##	430	122.83902	3.778305	1.280976	8.652203	1.1330508	2.876949	8.827627	3.374506
##	350	103.90133	4.224963	1.446689	9.171281	0.9662739	3.860236	7.557437	2.151905
##	516	129.70388	4.071519	1.245242	8.124031	1.3444961	3.084186	9.825116	3.697256
##	14	111.65428	4.340242	1.377621	8.939963	0.9882900	3.473048	6.590892	2.248439
##	577	112.68019	3.937847	1.319218	8.500000	1.0216849	3.375819	9.060686	3.100515
##	403	139.51962	3.788478	1.201378	7.452564	0.8402244	3.347596	7.769712	2.644355
##	10	109.18773	4.723339	1.451439	9.370217	1.1469314	3.681408	6.301625	1.943105
##	531	162.96467	3.724106	1.203864	7.841359	1.1353028	2.997932	9.695864	3.718718
##	342	109.16584	4.463367	1.478469	9.686567	1.0605307	3.622720	6.704809	2.101426
##	465	112.92998	3.702241	1.259637	8.218238	0.8052550	3.130757	8.051159	3.266788
##	210	93.23967	4.479802	1.563114	10.109256	1.0595041	3.949256	6.875702	1.834413

##	132	97.89529	4.836228	1.504181	9.897006	1.4059880	3.657485	6.720808	2.224392
##	390	100.42938	4.904473	1.517844	9.186260	1.2668702	4.472672	7.442595	1.928349
##	228	98.79338	5.329590	1.574792	10.163091	1.4329653	4.017035	5.945584	1.690221
##	271	135.72959	3.748765	1.256424	8.281481	0.6552469	3.017284	6.917130	2.567154
##	520	153.41340	4.150982	1.315394	8.286458	1.0514881	3.548810	8.098363	2.455716
##	304	103.25949	4.571136	1.446466	8.954425	1.0687316	4.052212	7.096313	2.073717
##	133	98.96134	4.732110	1.483188	10.015022	1.2456496	3.330971	5.735069	2.016836
##	28	127.07014	4.424327	1.405808	8.956566	0.9580808	3.678620	6.364141	2.123906
##	561	152.29517	4.047733	1.330417	7.803145	0.8723460	4.158978	8.606029	2.502492
##	200	105.06290	4.783081	1.558960	9.978226	1.2416129	4.054839	6.957581	2.005952
##	144	114.06155	4.299340	1.530214	9.433494	1.0135266	4.333655	7.772625	2.264446
##	274	126.47017	4.332434	1.337099	8.901327	0.9143068	3.138348	6.431416	2.337214
##	376	131.57030	3.554281	1.242322	7.713849	0.7433453	3.451079	8.161691	2.846901
##	293	145.68289	3.907645	1.311378	8.438462	0.9397174	3.364678	8.159184	3.438812
##	225	136.38449	4.210190	1.397054	9.060601	0.8226266	3.531487	6.149525	2.074051
##	444	144.73533	3.712387	1.188480	7.848050	0.8436817	2.850234	7.699220	3.049766
##	332	87.92536	4.987630	1.547732	9.628084	1.2941558	4.308117	6.792208	1.893117
##	149	108.81862	4.581798	1.461889	8.911878	1.1321027	4.268539	6.987319	1.772199
##	628	171.91470	5.301964	1.520549	9.082545	1.5112727	4.605455	8.098182	2.107701
##	263	134.11473	3.882078	1.300553	8.473023	0.8559690	3.214729	7.929302	2.750853
##	384	117.27001	4.156887	1.376792	8.963365	1.0111635	3.430975	7.352516	2.376866
##	388	139.17696	3.986911	1.267651	8.482722	0.9506116	2.935474	7.152141	2.807278
##	356	153.68118	4.040171	1.275860	7.969518	0.9253499	3.506998	7.688336	2.726967
##	358	124.42988	3.866372	1.328372	8.462652	0.8689024	3.497256	7.789787	2.577551
##	130	117.04957	4.340137	1.317610	8.425983	1.0818803	3.436752	6.776581	2.253983
##	629	244.36528	4.101968	1.256847	7.614056	1.3313253	3.693173	11.087952	3.641211
##	481	101.66222	3.766309	1.288832	8.611618	0.9097059	2.990147	8.177647	3.051175
##	83	105.69315	4.452816	1.449538	9.798727	1.0992513	3.229443	6.538648	2.291044
##	112	125.68122	4.590031	1.410384	8.456836	1.0878648	4.246697	7.231336	1.757803
##	386	124.99037	3.704013	1.297928	8.799518	0.9166934	2.885393	8.014607	3.100105
##	455	125.40265	3.700328	1.277986	8.620156	1.0137500	2.883906	8.651094	3.194130
##	211	94.61290	4.437290	1.384100	8.731290	1.1077419	3.712419	7.056129	2.095597
##	75	121.26087	4.258804	1.411886	8.702355	1.0740942	4.003804	8.422101	2.311331
##	97	112.89882	4.966467	1.492039	9.111035	1.1825867	4.308031	6.900988	1.907847
##	8	104.86874	4.734611	1.463171	9.154922	1.1946459	4.020898	6.935579	1.830570
##	609	100.28002	4.958686	1.401261	8.654000	1.5404286	3.986143	8.670286	2.612587
##	491	108.43164	3.858540	1.280606	8.223304	1.0637168	3.302655	9.063864	2.880825
##	136	119.14027	3.948222	1.284656	8.181538	0.9673504	3.368376	7.343077	2.659957
##	328	112.90179	4.468289	1.329714	8.654613	1.2135417	3.304613	7.154167	2.565000
##	241	130.10865	4.549063	1.400321	8.966359	1.1121352	3.621045	6.998464	2.359263
##	423	97.74877	4.831757	1.482729	9.270936	1.3169130	4.081117	7.174056	1.910192
##	55	119.69135	4.928827	1.548697	9.756392	1.2598949	4.198949	6.983713	2.100648
##	581	101.92631	4.160165	1.450858	8.949794	0.9437414	4.090922	8.454195	2.366219
##	398	109.13488	3.805116	1.403462	9.062791	0.7333333	3.570543	7.600620	2.319016
##	121	137.06691	3.813978	1.146193	7.192767	0.9191682	3.125136	7.897468	3.267776
##	580	125.64250	3.937310	1.246396	8.411016	1.1381974	2.801860	9.035050	3.967171
##	434	109.37078	3.825138	1.277798	8.375846	0.9612308	3.116462	7.918769	3.041231
##	483	116.99074	3.710664	1.325380	8.315741	0.7709877	3.612346	8.312654	2.582175
##	56	132.11029	4.602390	1.331772	7.892647	1.1301471	4.088419	7.381250	2.036893
##	306	128.60769	3.655908	1.381189	8.614000	0.6361538	3.809846	8.087385	2.338862
##	160	109.43822	4.775677	1.591376	10.211248	1.0764499	4.113708	6.077680	1.596690
##	569	121.66974	3.836058	1.192591	7.768915	1.1537037	2.960847	9.627116	3.753749
##	655	121.07948	4.340989	1.344258	8.160585	1.1778552	3.934680	8.815042	2.415258
##	189	118.44182	4.196714	1.415637	8.999528	0.8943396	3.750157	6.802673	2.097311

##	261	106.77116	4.580376	1.434547	9.330564	1.2531348	3.566614	8.031505	2.487680
##	52	99.07636	5.117369	1.496905	8.800360	1.2850450	4.676216	7.115315	1.764216
##	329	133.59030	4.208462	1.336916	8.517224	0.9811037	3.507525	7.327926	2.253311
##	658	122.43857	4.022510	1.273436	8.168296	1.0089828	3.298811	8.590225	3.144346
##	326	120.27448	4.408514	1.332184	8.420804	1.0629371	3.580769	6.676748	2.078285
##	227	118.99854	4.604123	1.505101	9.493129	1.0418129	4.065936	6.799561	2.204254
##	509	129.96319	4.096215	1.313308	8.676183	1.1555205	3.150315	8.512145	3.134639
##	318	133.84292	4.342939	1.340025	8.728771	1.0707621	3.346501	7.065163	2.431674
##	352	159.30721	3.512414	1.277821	7.784796	0.6816614	3.713950	8.473197	2.736082
##	579	115.45318	3.742377	1.280376	8.210127	0.8839662	3.317722	8.512377	2.803224
##	230	113.69744	4.625554	1.421741	8.624858	1.2546875	4.165625	8.469744	2.249389
##	246	100.55603	4.632070	1.501902	9.419032	0.9781302	4.092487	6.488147	1.767040
##	563	118.45386	4.502111	1.411392	9.086283	1.2370095	3.618617	7.961601	2.588929
##	31	116.44492	4.659034	1.388451	8.621970	1.1342803	3.878409	6.809091	2.054715
##	126	178.23501	3.658825	1.260756	7.563651	0.6444444	3.802063	7.199365	2.213196
##	313	115.16944	4.565880	1.431465	8.738704	1.0686047	4.129900	6.862292	1.795714
##	242	122.35149	4.206815	1.399794	9.063861	0.8632013	3.541749	6.800495	2.540924
##	120	123.45258	3.828702	1.313456	8.458070	0.9272879	3.355075	7.857737	2.479468
##	101	134.77138	3.978831	1.313377	8.433333	1.0322862	3.386911	7.829145	2.754689
##	616	207.69996	4.137361	1.285361	8.021528	1.0736111	3.542014	8.830556	3.049347
##	419	139.33070	3.826820	1.352424	8.558386	0.8696203	3.614715	8.019462	2.534557
##	557	126.22085	4.031578	1.297902	8.088707	1.0221769	3.591429	8.698912	2.719302
##	78	136.75809	4.277138	1.368034	9.199659	1.0238501	3.121124	6.721295	2.553441
##	217	134.40397	4.219321	1.281346	8.332119	1.1771523	3.188079	7.814073	2.763328
##	43	128.45520	4.009570	1.379860	8.513620	0.8179211	3.901254	7.624014	2.102957
##	632	118.14938	4.497265	1.323141	8.167949	1.4311966	3.735043	9.805556	3.130359
##	284	117.04783	4.366726	1.481785	9.629297	1.1260090	3.724365	7.911958	2.190538
##	552	116.90113	3.962514	1.284311	8.499011	1.0802260	3.055085	8.759322	3.114480
##	570	84.53041	4.504300	1.410129	8.737341	1.1742574	3.958133	8.214286	2.149487
##	194	127.71363	4.206177	1.311227	8.617195	1.1751252	3.168114	7.489649	3.078341
##	661	141.91944	4.020866	1.250382	7.776365	1.1828957	3.466806	9.851620	3.169012
##	453	110.69605	3.623435	1.282406	8.084954	0.7747720	3.468845	8.533131	3.019579
##	294	167.39867	4.106545	1.337904	8.299834	0.8606312	3.743355	7.245183	2.067159
##	156	108.09419	4.711900	1.437903	9.049608	1.2111460	3.900000	6.576766	1.880330
##	362	113.39514	3.754422	1.279655	8.124587	0.8338284	3.409901	8.094554	3.103746
##	285	121.41774	4.112875	1.419037	9.340185	0.9032457	3.446832	7.166770	2.203389
##	578	114.56241	3.606944	1.268937	8.299426	0.9949785	3.120373	9.789383	3.758670
##	220	115.41010	4.220773	1.409227	9.006686	0.8566122	3.671917	6.089004	1.671694
##	142	97.26850	4.203421	1.385445	8.585434	0.9219313	3.888052	6.870049	1.865604
##	15	146.80905	4.012283	1.360679	8.597358	0.8784906	3.666604	7.580566	2.279811
##	608	120.61237	4.332350	1.263989	8.040854	1.2297730	3.324833	8.613351	3.078375
##	300	115.51085	4.408563	1.460609	9.178293	0.9236527	3.957036	6.812874	1.991110
##	163	127.19919	4.164474	1.338777	8.965062	1.0689840	3.068806	6.876827	2.897344
##	548	130.75790	4.229669	1.347706	8.727410	1.1290663	3.401205	8.203464	2.807410
##	634	98.31307	5.196707	1.681189	11.288353	1.8963855	3.856225	9.941767	3.075189
##	555	117.83514	4.100392	1.325907	8.632027	1.2093243	3.299054	9.210000	3.373743
##	511	132.72764	3.554531	1.176307	7.515755	0.9709635	3.072396	9.638151	3.940860
##	368	103.67519	4.397699	1.457571	9.403609	1.1690226	3.727218	7.620451	2.187504
##	70	104.51471	4.558627	1.430183	8.939869	1.1017974	3.932026	7.299510	1.924771
##	239	189.97084	3.573379	1.225868	8.645111	0.8871355	2.392796	7.846827	3.552776
##	123	98.83217	5.089545	1.519007	9.714685	1.3372378	3.953497	6.121678	1.791573
##	333	172.64724	3.352761	1.248618	7.495859	0.6711656	3.734969	9.237730	2.733635
##	138	141.20302	4.030554	1.315780	8.871980	1.0135906	2.977517	6.674497	2.650117
##	224	123.08928	4.407492	1.330941	8.828114	1.1060606	3.147306	6.263300	2.259774

##	193	128.11397	4.060816	1.414867	9.309600	0.9043200	3.416800	6.919360	2.517693
##	645	128.99263	4.132776	1.293139	8.025472	1.1343666	3.617520	9.126685	2.984290
##	649	128.66331	3.678057	1.217731	7.664002	1.1292900	3.311125	10.501027	4.364280
##	656	107.73850	4.238177	1.436718	8.901934	1.1215470	4.010497	9.306768	2.909178
##	135	104.84048	4.835386	1.557312	9.869297	1.1909091	4.151801	6.144082	1.707067
##	498	116.47869	3.514365	1.226522	8.489841	0.8265079	2.537778	8.176984	3.579426
##	387	175.02090	3.464373	1.201688	7.845659	0.8290997	2.982797	8.611093	3.284695
##	439	170.20067	3.552367	1.246331	7.966144	0.7706897	3.237461	8.163950	2.653757
##	330	114.95058	4.305535	1.399445	9.062438	1.0499176	3.530478	7.383526	2.502323
##	599	95.47742	5.005335	1.411379	8.413267	1.4972896	4.293866	9.014551	2.375225
##	467	118.18188	3.936066	1.370580	9.031661	0.8623824	3.288871	7.586677	2.761747
##	538	118.28857	4.139371	1.379254	8.919000	1.0240000	3.502429	7.854429	2.434817
##	587	125.20806	4.500801	1.416961	8.881004	1.3282225	3.873677	9.217096	3.687653
##	175	98.69073	4.944155	1.590349	9.422591	1.1870458	4.886098	7.283570	1.798970
##	589	122.90176	4.224962	1.392980	8.241310	1.2107053	4.283123	10.430730	2.626981
##	622	101.08762	5.562972	1.625149	10.561044	1.6530120	4.073092	7.442169	2.193895
##	518	97.89805	4.535322	1.450100	9.499550	1.3748126	3.558021	8.549475	2.738411
##	203	112.64273	4.335042	1.461028	9.992426	0.9773936	3.128730	6.150288	2.337979
##	179	122.90997	4.144791	1.357661	8.133601	1.0479100	4.075241	8.515756	2.578232
##	422	124.82373	3.556000	1.330295	8.459831	0.8783051	3.512881	9.050339	2.989898
##	214	116.93253	4.234097	1.434482	9.337365	0.9386282	3.570397	6.684657	2.122906
##	605	108.59322	4.873154	1.365123	8.847521	1.5805785	3.443388	8.678650	2.719147
##	178	139.91808	4.126043	1.298838	8.613189	0.9639399	3.063105	6.819032	2.847379
##	344	99.29391	4.059909	1.433985	9.178843	1.0363775	3.727549	8.420700	2.321878
##	461	132.12378	3.709788	1.236840	8.066287	0.7973941	3.068730	7.926710	3.109217
##	440	131.56240	3.845732	1.275706	8.310632	0.9927581	3.180586	8.253159	2.938963
##	449	93.09591	4.299323	1.478237	9.832863	1.0530324	3.476305	7.377715	2.360615
##	606	108.46115	4.766559	1.459900	9.056882	1.4949438	4.094382	9.716854	2.760503
##	418	106.59603	4.262304	1.338055	8.266820	1.0497696	3.781720	7.616897	2.253707
##	550	112.43229	4.129593	1.415417	9.083886	0.9887048	3.666566	8.109187	2.536479
##	62	97.33582	5.128779	1.555919	9.783388	1.3806189	4.223616	6.904397	1.743959
##	371	130.67322	3.404547	1.236124	8.340604	0.7880872	2.793121	7.934228	3.195050
##	106	113.73346	4.489695	1.440299	9.535795	1.1157303	3.428090	6.482504	2.107319
##	184	121.78473	4.307069	1.377412	8.946870	1.2503817	3.447481	8.360458	2.639069
##	188	148.11390	3.797420	1.332477	8.677052	0.8688442	3.320268	7.837018	2.622831
##	321	142.60917	3.671354	1.316746	8.742923	0.8187692	3.099846	7.800308	2.758532
##	539	118.21629	3.993674	1.236339	8.238582	1.2546099	2.882837	9.060000	3.536552
##	186	127.74100	4.078631	1.325897	8.366506	0.9481481	3.561514	7.475523	2.356403
##	307	104.75387	4.870217	1.550800	10.282353	1.2599071	3.678947	6.338390	1.836813
##	590	115.80988	4.481030	1.360688	8.148238	1.1953930	4.095122	9.066802	2.513403
##	485	113.37193	4.135718	1.307339	9.018035	1.0215543	2.759971	6.562757	2.877763
##	573	93.80861	4.473801	1.376216	8.868778	1.3435897	3.527149	8.816893	2.893135
##	254	98.11810	4.772669	1.556253	9.594785	0.9164110	4.417638	6.496779	1.702239
##	34	127.63347	3.884661	1.301221	8.249602	0.8296813	3.465139	7.688247	2.465458
##	131	113.62981	4.181106	1.366154	8.817628	0.9947115	3.470192	6.735256	2.127596
##	536	96.92423	4.870863	1.549853	10.169345	1.4178571	3.799702	7.877381	2.255016
##	487	130.91472	3.904203	1.303408	8.226555	1.0666161	3.517147	9.387557	3.151588
##	338	114.23742	3.915264	1.316118	8.375415	0.8720965	3.477074	7.454449	2.235464
##	94	113.25455	4.670612	1.397873	8.493388	1.1062810	4.077190	6.967273	2.287497
##	343	127.61950	4.041226	1.422148	8.599371	0.8389937	4.208648	7.866824	2.287814
##	204	111.13409	4.434055	1.411278	8.375283	1.2284330	4.318578	8.596931	2.302213
##	104	116.10423	3.889023	1.359212	8.485179	1.0605863	3.768078	9.191694	2.695831
##	107	119.63793	5.055784	1.449053	9.221630	1.4855799	3.827900	6.806740	1.957841
##	457	123.34716	3.855760	1.316837	8.280645	0.8983103	3.585868	8.411367	2.758535

```

## 366 125.53461 3.903505 1.307050 8.899411 1.0985272 2.865538 7.880854 3.497546
## 515 127.34286 3.586029 1.270044 8.307000 0.9952857 3.121429 9.473857 3.429216
## 410 191.64139 3.286509 1.101864 7.094629 0.7993681 2.822433 9.039494 3.676066
## 426 123.88152 3.485908 1.302529 8.258136 0.6737757 3.438705 7.834755 2.434945
## 564 122.68282 4.071189 1.346671 8.469604 1.1077827 3.641703 9.034214 2.882599
## 174 108.36529 4.740331 1.485283 9.547769 1.1887603 3.841322 6.511901 2.068860
## 596 99.99513 4.702727 1.507518 9.500587 1.2788856 4.052933 8.435777 2.265278
## 391 128.48404 4.117197 1.256030 8.049363 1.0984076 3.251592 8.052070 2.662675
## 273 129.68285 4.070388 1.418492 8.972492 0.7503236 3.790453 7.384466 2.390599
## 206 97.09633 4.787722 1.523323 10.382722 1.2452599 3.315902 5.924924 2.049006
## 215 123.30172 4.230741 1.372779 9.146552 0.9855172 3.218103 6.422241 2.369045
## 412 114.13584 4.353409 1.388084 9.028158 1.2284627 3.461948 8.123744 3.032308
## 360 160.07328 3.247024 1.240759 7.673363 0.6459821 3.485714 8.936012 2.673329
## 345 118.39221 4.014737 1.310750 8.990271 0.9752791 2.796172 6.698405 2.632919
## 568 114.79320 4.338807 1.349207 8.505111 1.2052425 3.635518 8.650328 2.601868
## 603 138.12495 4.160707 1.302327 8.171994 1.3554455 3.544837 10.299151 3.138684
## 253 138.84567 4.304087 1.363638 8.460435 0.9021739 3.802319 7.271884 2.318275
## 349 118.23165 3.988532 1.357178 8.696411 0.9037520 3.500979 7.947961 2.787217
## 593 108.85195 5.190173 1.495407 9.584707 1.6430851 3.877660 8.176197 2.381533
##      year.pitch W.L..next_year
## 617      2020      32.1
## 173      2003      54.9
## 240      2006      54.3
## 168      2003      44.7
## 36       1998      47.5
## 234      2006      54.3
## 129      2002      54.3
## 29       1998      41.4
## 657      2021      68.5
## 166      2003      56.2
## 472      2015      54.9
## 407      2012      46.9
## 46       1998      48.8
## 528      2017      50.6
## 124      2001      48.1
## 592      2019      51.7
## 586      2019      41.7
## 601      2019      60.0
## 612      2019      36.7
## 61       1999      53.1
## 216      2005      57.4
## 462      2014      45.7
## 583      2018      48.1
## 346      2010      47.5
## 458      2014      53.7
## 630      2020      45.1
## 510      2016      49.4
## 613      2019      53.3
## 635      2020      37.7
## 429      2013      48.8
## 339      2010      45.1
## 354      2010      55.6
## 400      2012      40.7
## 141      2002      59.3

```

## 567	2018	36.4
## 91	2000	63.0
## 251	2006	45.1
## 171	2003	38.9
## 347	2010	59.9
## 319	2009	48.8
## 372	2011	40.7
## 320	2009	58.6
## 428	2013	43.2
## 566	2018	66.0
## 359	2011	50.0
## 547	2017	49.4
## 159	2003	56.8
## 77	2000	39.1
## 108	2001	34.2
## 624	2020	58.6
## 76	2000	54.3
## 653	2021	40.7
## 117	2001	49.7
## 207	2005	46.9
## 460	2014	38.9
## 442	2014	48.8
## 370	2011	53.1
## 152	2003	48.1
## 257	2007	54.6
## 484	2015	45.1
## 574	2018	63.6
## 554	2017	41.4
## 392	2012	55.6
## 192	2004	54.3
## 265	2007	54.0
## 275	2007	48.8
## 286	2008	52.8
## 134	2002	53.7
## 69	1999	46.9
## 155	2003	51.2
## 7	1997	47.5
## 436	2013	53.7
## 389	2012	59.9
## 490	2015	48.4
## 673	2021	34.0
## 88	2000	52.5
## 287	2008	45.7
## 414	2013	39.5
## 219	2005	54.3
## 21	1997	47.2
## 471	2015	42.2
## 513	2016	53.1
## 232	2006	44.4
## 250	2006	51.2
## 292	2008	43.2
## 659	2021	53.1
## 164	2003	43.8
## 521	2016	39.5

## 244	2006	42.0
## 584	2018	41.4
## 79	2000	54.3
## 122	2001	59.9
## 652	2021	42.0
## 4	1997	55.2
## 660	2021	48.1
## 644	2021	45.7
## 433	2013	54.3
## 618	2020	56.8
## 600	2019	48.3
## 305	2009	40.1
## 236	2006	42.6
## 448	2014	39.5
## 540	2017	56.4
## 20	1997	54.6
## 325	2009	56.8
## 100	2001	60.5
## 111	2001	56.8
## 637	2020	66.0
## 323	2009	35.2
## 591	2019	58.3
## 223	2005	49.4
## 60	1999	47.5
## 507	2016	39.5
## 394	2012	57.4
## 5	1997	49.4
## 537	2017	63.6
## 59	1999	44.4
## 514	2016	52.5
## 397	2012	56.8
## 260	2007	45.7
## 201	2005	48.8
## 276	2007	53.1
## 664	2021	53.7
## 619	2020	43.8
## 534	2017	41.4
## 417	2013	43.8
## 262	2007	46.3
## 598	2019	71.7
## 255	2007	58.6
## 71	1999	56.2
## 191	2004	54.3
## 182	2004	41.4
## 39	1998	59.5
## 597	2019	43.3
## 647	2021	48.1
## 383	2011	57.4
## 504	2016	41.4
## 183	2004	43.8
## 89	2000	50.6
## 473	2015	57.4
## 90	2000	59.4
## 424	2013	54.9

## 252	2007	50.6
## 496	2015	58.6
## 463	2014	51.9
## 535	2017	55.8
## 199	2004	49.4
## 87	2000	42.0
## 197	2004	61.7
## 291	2008	53.4
## 432	2013	45.1
## 336	2010	43.8
## 651	2021	56.8
## 157	2003	42.0
## 331	2009	42.6
## 571	2018	54.9
## 74	1999	51.2
## 640	2020	61.7
## 524	2016	49.4
## 72	1999	58.6
## 447	2014	46.9
## 670	2021	53.1
## 64	1999	58.0
## 363	2011	37.7
## 399	2012	45.7
## 115	2001	64.0
## 650	2021	38.3
## 493	2015	53.1
## 66	1999	56.5
## 421	2013	40.7
## 148	2002	43.8
## 559	2018	33.3
## 385	2011	60.5
## 302	2008	53.7
## 437	2013	55.6
## 452	2014	58.6
## 290	2008	49.4
## 226	2006	55.6
## 621	2020	51.2
## 53	1999	52.5
## 154	2003	54.9
## 667	2021	50.0
## 301	2008	51.9
## 497	2015	54.9
## 309	2009	46.3
## 585	2018	57.4
## 409	2012	59.9
## 373	2011	45.7
## 67	1999	40.1
## 614	2019	43.3
## 322	2009	59.9
## 636	2020	48.8
## 202	2005	43.2
## 582	2018	59.3
## 405	2012	58.0
## 218	2005	41.4

## 68	1999	42.6
## 303	2008	46.3
## 310	2009	54.3
## 544	2017	47.5
## 238	2006	51.2
## 615	2020	32.1
## 181	2004	45.1
## 562	2018	44.7
## 341	2010	34.6
## 446	2014	59.9
## 137	2002	42.0
## 374	2011	58.6
## 672	2021	56.8
## 23	1997	54.3
## 213	2005	59.3
## 443	2014	41.4
## 381	2011	54.3
## 212	2005	46.3
## 494	2015	53.1
## 542	2017	58.9
## 280	2008	39.5
## 431	2013	54.3
## 18	1997	42.6
## 312	2009	51.2
## 278	2008	43.2
## 556	2017	50.6
## 180	2004	61.1
## 209	2005	50.6
## 19	1997	60.5
## 177	2004	45.7
## 150	2003	31.5
## 476	2015	42.0
## 109	2001	51.9
## 470	2015	42.6
## 627	2020	65.4
## 93	2000	38.3
## 445	2014	48.1
## 84	2000	57.4
## 456	2014	51.2
## 382	2011	55.6
## 50	1999	52.5
## 416	2013	59.3
## 92	2000	53.1
## 641	2020	37.0
## 530	2017	29.0
## 247	2006	54.3
## 196	2004	42.6
## 314	2009	46.9
## 665	2021	38.3
## 594	2019	39.7
## 379	2011	58.0
## 272	2007	44.4
## 96	2000	71.6
## 351	2010	43.8

## 98	2000	45.1
## 264	2007	55.6
## 506	2016	53.7
## 47	1998	46.6
## 172	2003	64.8
## 411	2012	55.8
## 151	2003	59.3
## 103	2001	57.4
## 378	2011	46.9
## 268	2007	46.6
## 11	1997	51.2
## 45	1998	53.1
## 365	2011	59.9
## 139	2002	41.0
## 575	2018	59.9
## 671	2021	42.0
## 604	2019	60.0
## 187	2004	50.0
## 16	1997	45.7
## 565	2018	29.2
## 607	2019	61.7
## 413	2012	53.1
## 185	2004	34.6
## 477	2015	46.3
## 500	2016	44.4
## 145	2002	62.1
## 337	2010	48.8
## 51	1999	58.6
## 406	2012	46.9
## 377	2011	48.8
## 116	2001	63.6
## 113	2001	58.4
## 311	2009	56.2
## 25	1998	61.7
## 2	1997	48.8
## 266	2007	54.9
## 560	2018	51.9
## 393	2012	45.7
## 454	2014	43.8
## 631	2020	47.5
## 355	2010	56.2
## 221	2005	48.1
## 576	2018	50.0
## 395	2012	31.5
## 633	2020	53.1
## 249	2006	46.3
## 277	2007	36.6
## 529	2017	55.6
## 459	2014	42.0
## 662	2021	61.1
## 451	2014	53.1
## 348	2010	45.7
## 526	2016	46.9
## 638	2020	55.6

## 35	1998	39.8
## 489	2015	43.8
## 654	2021	65.4
## 229	2006	59.3
## 646	2021	51.2
## 317	2009	47.5
## 425	2013	58.0
## 488	2015	42.6
## 99	2000	49.4
## 205	2005	55.6
## 533	2017	38.3
## 81	2000	40.7
## 1	1997	65.4
## 367	2011	54.3
## 283	2008	48.8
## 13	1997	43.2
## 208	2005	58.6
## 527	2016	59.9
## 161	2003	57.4
## 475	2015	48.1
## 512	2016	47.5
## 9	1997	63.0
## 420	2013	46.9
## 289	2008	58.6
## 195	2004	46.3
## 269	2007	56.8
## 335	2010	55.6
## 17	1997	46.3
## 297	2008	46.3
## 666	2021	54.9
## 623	2020	47.5
## 190	2004	58.6
## 295	2008	57.4
## 222	2005	51.6
## 501	2016	46.3
## 464	2014	46.9
## 140	2002	62.3
## 176	2004	55.6
## 558	2018	59.9
## 546	2017	59.9
## 102	2001	41.4
## 12	1997	45.7
## 430	2013	51.9
## 350	2010	44.4
## 516	2016	56.2
## 14	1997	54.3
## 577	2018	42.6
## 403	2012	59.3
## 10	1997	44.7
## 531	2017	66.7
## 342	2010	43.8
## 465	2014	61.7
## 210	2005	38.3
## 132	2002	45.7

## 390	2012	40.7
## 228	2006	42.6
## 271	2007	38.9
## 520	2016	43.8
## 304	2008	36.4
## 133	2002	26.5
## 28	1998	58.0
## 561	2018	51.9
## 200	2005	46.9
## 144	2002	39.5
## 274	2007	53.1
## 376	2011	50.0
## 293	2008	63.6
## 225	2005	43.8
## 444	2014	50.0
## 332	2010	58.0
## 149	2002	53.1
## 628	2020	41.4
## 263	2007	51.9
## 384	2011	45.1
## 388	2012	52.5
## 356	2010	59.3
## 358	2010	49.7
## 130	2002	53.1
## 629	2020	58.6
## 481	2015	45.7
## 83	2000	40.7
## 112	2001	34.6
## 386	2012	50.0
## 455	2014	42.0
## 211	2005	54.3
## 75	2000	56.8
## 97	2000	57.4
## 8	1997	40.1
## 609	2019	45.0
## 491	2015	42.0
## 136	2002	52.5
## 328	2009	59.3
## 241	2006	58.0
## 423	2013	43.2
## 55	1999	58.6
## 581	2018	56.2
## 398	2012	38.3
## 121	2001	57.4
## 580	2018	42.0
## 434	2013	47.5
## 483	2015	49.1
## 56	1999	52.5
## 306	2009	56.2
## 160	2003	35.8
## 569	2018	65.4
## 655	2021	40.1
## 189	2004	51.2
## 261	2007	53.4

## 52	1999	45.7
## 329	2009	55.6
## 658	2021	42.6
## 326	2009	37.7
## 227	2006	51.9
## 509	2016	49.4
## 318	2009	58.0
## 352	2010	53.1
## 579	2018	47.5
## 230	2006	52.5
## 246	2006	43.8
## 563	2018	46.3
## 31	1998	58.9
## 126	2002	62.3
## 313	2009	50.0
## 242	2006	46.9
## 120	2001	59.0
## 101	2001	63.1
## 616	2020	54.7
## 419	2013	45.1
## 557	2018	52.5
## 78	2000	50.9
## 217	2005	52.5
## 43	1998	48.4
## 632	2020	56.8
## 284	2008	48.1
## 552	2017	54.3
## 570	2018	35.2
## 194	2004	50.6
## 661	2021	62.3
## 453	2014	56.8
## 294	2008	46.3
## 156	2003	46.9
## 362	2011	42.6
## 285	2008	56.8
## 578	2018	43.2
## 220	2005	47.2
## 142	2002	53.1
## 15	1997	70.4
## 608	2019	48.3
## 300	2008	56.2
## 163	2003	56.8
## 548	2017	50.9
## 634	2020	50.6
## 555	2017	45.1
## 511	2016	64.2
## 368	2011	34.0
## 70	1999	59.9
## 239	2006	48.8
## 123	2001	44.4
## 333	2010	54.9
## 138	2002	55.6
## 224	2005	53.7
## 193	2004	41.4

## 645	2021	62.3
## 649	2021	50.0
## 656	2021	45.1
## 135	2002	51.2
## 498	2015	58.6
## 387	2012	59.3
## 439	2013	41.4
## 330	2009	52.5
## 599	2019	51.7
## 467	2014	54.3
## 538	2017	35.8
## 587	2019	58.3
## 175	2004	47.5
## 589	2019	40.0
## 622	2020	46.0
## 518	2016	40.7
## 203	2005	53.1
## 179	2004	48.8
## 422	2013	55.6
## 214	2005	59.9
## 605	2019	46.7
## 178	2004	58.6
## 344	2010	59.3
## 461	2014	60.5
## 440	2013	51.2
## 449	2014	42.0
## 606	2019	31.7
## 418	2013	45.1
## 550	2017	45.1
## 62	1999	45.1
## 371	2011	51.2
## 106	2001	48.1
## 184	2004	54.9
## 188	2004	51.2
## 321	2009	50.0
## 539	2017	49.4
## 186	2004	43.8
## 307	2009	40.7
## 590	2019	56.7
## 485	2015	36.4
## 573	2018	53.1
## 254	2007	42.2
## 34	1998	59.9
## 131	2002	42.6
## 536	2017	39.5
## 487	2015	51.9
## 338	2010	48.8
## 94	2000	48.8
## 343	2010	50.9
## 204	2005	40.7
## 104	2001	41.4
## 107	2001	45.1
## 457	2014	55.6
## 366	2011	39.5

```
## 515      2016      43.2
## 410      2012      56.4
## 426      2013      47.5
## 564      2018      43.8
## 174      2003      41.6
## 596      2019      43.3
## 391      2012      38.9
## 273      2007      37.7
## 206      2005      49.4
## 215      2005      59.9
## 412      2012      45.7
## 360      2011      58.0
## 345      2010      38.9
## 568      2018      44.4
## 603      2019      55.0
## 253      2007      44.4
## 349      2010      63.0
## 593      2019      43.3
```

```
names(train.df)
```

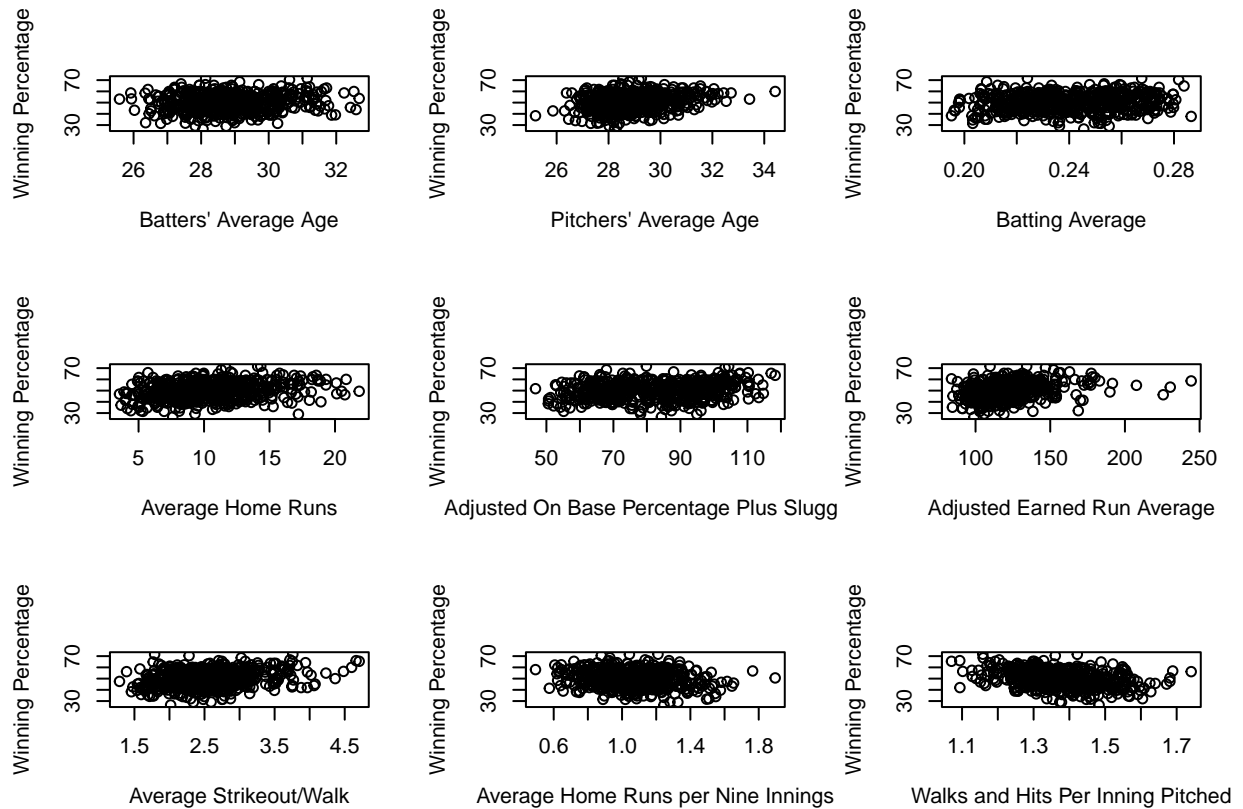
```
## [1] "long_Tm.pitch" "Tm"          "Rk.bat"      "Age.bat"
## [5] "G.bat"         "PA"          "AB"          "R.bat"
## [9] "H.bat"         "X2B"         "X3B"         "HR.bat"
## [13] "RBI"          "SB"          "CS"          "BB.bat"
## [17] "SO.bat"       "BA"          "OBP"         "SLG"
## [21] "OPS"          "OPSplus"     "TB"          "GDP"
## [25] "HBP.bat"      "SH"          "SF"          "IBB.bat"
## [29] "year.bat"     "long_Tm.bat" "Rk.pitch"    "Age.pitch"
## [33] "W"            "L"           "W.L..same_year" "ERA"
## [37] "G.pitch"      "GS"          "GF"          "CG"
## [41] "SHO"          "SV"          "IP"          "H.pitch"
## [45] "R.pitch"      "ER"          "HR.pitch"    "BB.pitch"
## [49] "IBB.pitch"    "SO.pitch"    "HBP.pitch"   "BK"
## [53] "WP"           "BF"          "ERApplus"    "FIP"
## [57] "WHIP"         "H9"          "HR9"         "BB9"
## [61] "SO9"          "SO.W"        "year.pitch"  "W.L..next_year"
```

```
# Explore Potential Predictors
par(mfrow=c(3,3))
plot(W.L..next_year ~ Age.bat, data=train.df,
     xlab="Batters' Average Age", ylab="Winning Percentage")
plot(W.L..next_year ~ Age.pitch, data=train.df,
     xlab="Pitchers' Average Age", ylab="Winning Percentage")
plot(W.L..next_year ~ BA, data=train.df,
     xlab="Batting Average", ylab="Winning Percentage")
plot(W.L..next_year ~ HR.bat, data=train.df,
     xlab="Average Home Runs", ylab="Winning Percentage")
plot(W.L..next_year ~ OPSplus, data=train.df,
     xlab="Adjusted On Base Percentage Plus Slugging", ylab="Winning Percentage")
plot(W.L..next_year ~ ERAplus, data=train.df,
     xlab="Adjusted Earned Run Average", ylab="Winning Percentage")
plot(W.L..next_year ~ SO.W, data=train.df,
```

```

xlab="Average Strikeout/Walk", ylab="Winning Percentage")
plot(W.L..next_year ~ HR9, data=train.df,
xlab="Average Home Runs per Nine Innings", ylab="Winning Percentage")
plot(W.L..next_year ~ WHIP, data=train.df,
xlab="Walks and Hits Per Inning Pitched", ylab="Winning Percentage")

```



```

# Summary statistics for winpct
summary(train.df$W.L..next_year)

```

```

##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##  26.50  43.95   50.00   50.00  55.80   71.70

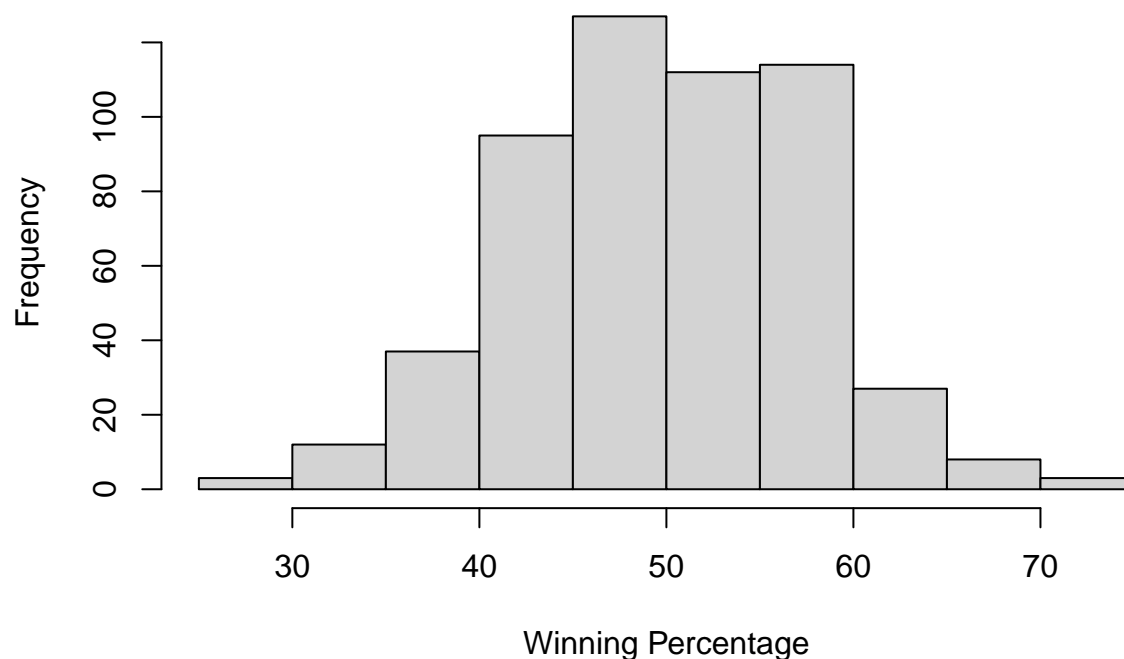
```

```

# Histogram for winpct
hist(train.df$W.L..next_year, main="Distribution of Winning Percentage",
xlab="Winning Percentage")

```


Distribution of Winning Percentage



Correlation matrix

```
cor(train.df[, c("W.L..next_year", "Age.bat", "Age.pitch", "BA", "HR.bat", "OPS", "ERApplus", "SO.W", "HR9", "WHIP")])
```

```
##           W.L..next_year    Age.bat    Age.pitch          BA      HR.bat
## W.L..next_year      1.0000000  0.11141662  0.256235346  0.13869742  0.25108249
## Age.bat             0.1114166  1.00000000  0.545794150  0.16500389  0.13873673
## Age.pitch           0.2562353  0.54579415  1.000000000  0.12855541  0.21200903
## BA                  0.1386974  0.16500389  0.128555409  1.00000000  0.53638250
## HR.bat              0.2510825  0.13873673  0.212009033  0.53638250  1.00000000
## OPS                 0.2216682  0.12517707  0.171517130  0.90898693  0.69977018
## ERApplus            0.3105273  0.05890000  0.092571300  0.04273984  0.04219967
## SO.W                0.2524674 -0.11269457  0.004411464 -0.13632938  0.05707431
## HR9                 -0.1913131 -0.15683275 -0.095501272  0.03574496  0.13610590
## WHIP                -0.3596620 -0.02148829 -0.108962513  0.14364460 -0.03330372
##           OPS      ERApplus      SO.W      HR9      WHIP
## W.L..next_year  0.22166824  0.31052730  0.252467448 -0.19131311 -0.35966197
## Age.bat         0.12517707  0.05890000 -0.112694574 -0.15683275 -0.02148829
## Age.pitch       0.17151713  0.09257130  0.004411464 -0.09550127 -0.10896251
## BA              0.90898693  0.04273984 -0.136329381  0.03574496  0.14364460
## HR.bat          0.69977018  0.04219967  0.057074312  0.13610590 -0.03330372
## OPS             1.00000000  0.10624827 -0.014463824  0.18901505  0.09705280
## ERApplus        0.10624827  1.00000000  0.476452488 -0.36301566 -0.65001605
## SO.W            -0.01446382  0.47645249  1.000000000 -0.08606211 -0.74341139
## HR9             0.18901505 -0.36301566 -0.086062105  1.00000000  0.45199344
## WHIP            0.09705280 -0.65001605 -0.743411391  0.45199344  1.00000000
```

```
cor(train.df[, c("W.L..next_year", "Age.bat", "Age.pitch", "BA", "HR.bat", "OPS", "ERApplus", "SO.W", "H
```

```
##           W.L..next_year    Age.bat    Age.pitch          BA      HR.bat
## W.L..next_year    1.00000000 0.0124136625 6.565655e-02 0.019236975 0.063042418
## Age.bat           0.01241366 1.0000000000 2.978913e-01 0.027226284 0.019247880
## Age.pitch         0.06565655 0.2978912544 1.000000e+00 0.016526493 0.044947830
## BA                0.01923698 0.0272262840 1.652649e-02 1.000000000 0.287706185
## HR.bat            0.06304242 0.0192478796 4.494783e-02 0.287706185 1.000000000
## OPS               0.04913681 0.0156692998 2.941813e-02 0.826257247 0.489678298
## ERAplus           0.09642720 0.0034692097 8.569446e-03 0.001826694 0.001780812
## SO.W              0.06373981 0.0127000670 1.946102e-05 0.018585700 0.003257477
## HR9               0.03660071 0.0245965110 9.120493e-03 0.001277702 0.018524815
## WHIP              0.12935673 0.0004617465 1.187283e-02 0.020633770 0.001109137
##           OPS      ERAplus      SO.W      HR9      WHIP
## W.L..next_year 0.0491368074 0.096427202 6.373981e-02 0.036600708 0.1293567297
## Age.bat        0.0156692998 0.003469210 1.270007e-02 0.024596511 0.0004617465
## Age.pitch      0.0294181260 0.008569446 1.946102e-05 0.009120493 0.0118728293
## BA             0.8262572472 0.001826694 1.858570e-02 0.001277702 0.0206337701
## HR.bat         0.4896782980 0.001780812 3.257477e-03 0.018524815 0.0011091374
## OPS            1.0000000000 0.011288694 2.092022e-04 0.035726690 0.0094192462
## ERAplus        0.0112886939 1.000000000 2.270070e-01 0.131780372 0.4225208647
## SO.W           0.0002092022 0.227006974 1.000000e+00 0.007406686 0.5526604959
## HR9            0.0357266900 0.131780372 7.406686e-03 1.000000000 0.2042980739
## WHIP           0.0094192462 0.422520865 5.526605e-01 0.204298074 1.0000000000
```

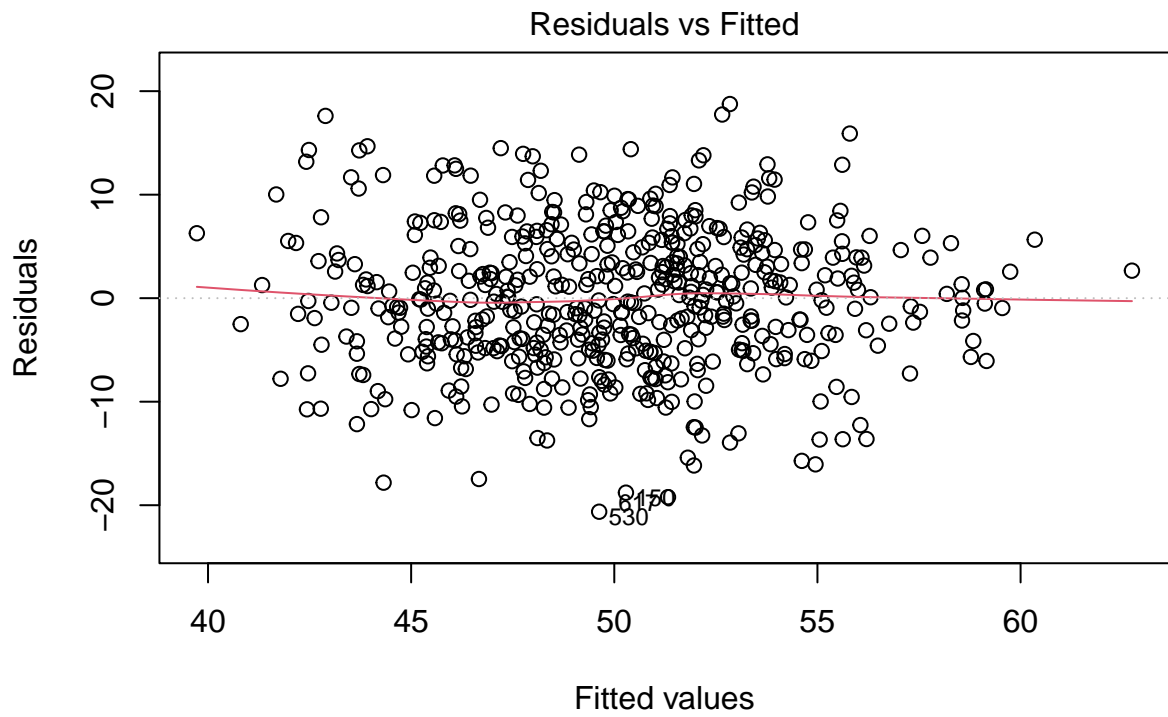
```
# Baseline Multiple Regression Model
```

```
baseline <- lm(W.L..next_year ~ Age.bat + Age.pitch + BA + HR.bat +
               OPS + ERAplus + SO.W + HR9 + WHIP, data = train.df)
summary(baseline)
```

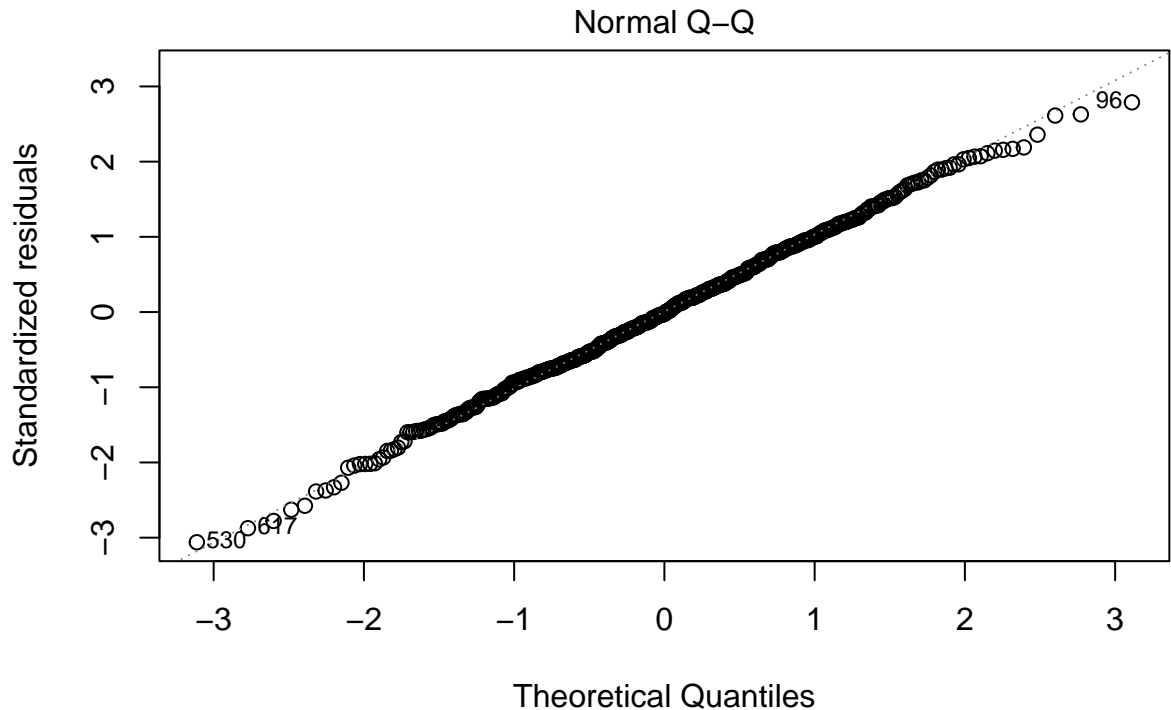
```
##
## Call:
## lm(formula = W.L..next_year ~ Age.bat + Age.pitch + BA + HR.bat +
##     OPS + ERAplus + SO.W + HR9 + WHIP, data = train.df)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -20.6280  -4.6172  -0.1484   4.7260  18.7545
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)  40.17145    13.20251   3.043 0.002461 **
## Age.bat      -0.19742     0.29411  -0.671 0.502359
## Age.pitch     1.07994     0.29179   3.701 0.000237 ***
## BA          -124.73995    44.18875  -2.823 0.004939 **
## HR.bat        0.11252     0.13189   0.853 0.393968
## OPS          65.42974    17.77410   3.681 0.000256 ***
## ERAplus       0.01522     0.02033   0.749 0.454211
## SO.W         -0.37073     0.86082  -0.431 0.666884
## HR9          -4.95688     1.94810  -2.544 0.011228 *
## WHIP        -19.98497     5.59811  -3.570 0.000390 ***
## ---
```

```
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 6.813 on 528 degrees of freedom
## Multiple R-squared:  0.2497, Adjusted R-squared:  0.2369
## F-statistic: 19.53 on 9 and 528 DF,  p-value: < 2.2e-16
```

```
# Assess Linear Model Assumptions
plot(baseline, which=c(1,2))
```



lm(W.L..next_year ~ Age.bat + Age.pitch + BA + HR.bat + OPS + ERAplus + SO. ...)



lm(W.L..next_year ~ Age.bat + Age.pitch + BA + HR.bat + OPS + ERAplus + SO. ...

Decision Tree/Random Forest

```
set.seed(139)
library(rpart)

RMSE = function(y,yhat){
  return(sqrt(mean((y-yhat)^2)))
}

test.df = subset(test.df, test.df$Tm != 'CLE')
tree1 = rpart(W.L..next_year~.,data=train.df, control = list(minsplit=1,cp=0,maxdepth=20))
yhat.tree1.train = predict(tree1)
yhat.tree1.test = predict(tree1, newdata = test.df)
RMSE.tree1.train = RMSE(train.df$W.L..next_year,yhat.tree1.train)
RMSE.tree1.test = RMSE(test.df$W.L..next_year,yhat.tree1.test)
data.frame(train=RMSE.tree1.train,test=RMSE.tree1.test)

##      train      test
## 1 3.815616 7.503374

best.cp = tree1$cptable[, "CP"][which.min(tree1$cptable[, "xerror"])]
tree2 = prune(tree1,best.cp)
yhat.tree2.train = predict(tree2)
```

```
yhat.tree2.test = predict(tree2,newdata=test.df)
RMSE.tree2.train = RMSE(train.df$W.L..next_yea,yhat.tree2.train)
RMSE.tree2.test = RMSE(test.df$W.L..next_year,yhat.tree2.test)
data.frame(train=RMSE.tree2.train,test=RMSE.tree2.test)
```

```
##      train      test
## 1 6.755428 6.11972
```

```
library(randomForest)
```

```
## randomForest 4.7-1.1
```

```
## Type rfNews() to see new features/changes/bug fixes.
```

```
##
## Attaching package: 'randomForest'
```

```
## The following object is masked from 'package:dplyr':
##
##      combine
```

```
set.seed(139)
maxnodes1 = maxnodes = c(10,20,50,100)
ntree=200
rmse.rf1 = rep(NA,length(maxnodes))
bestRMSE = sd(train.df$W.L..next_year)
# for(i in 1:length(maxnodes)){
#   rftemp = randomForest(W.L..next_year~, data=train.df, mtry=1, maxnodes=maxnodes[i], ntree=ntree)
#   rmse.rf1[i] = RMSE(train.df$W.L..next_year,rftemp$predicted)
#   if(rmse.rf1[i]<bestRMSE){
#     best_maxnodes = maxnodes[i]
#     bestRMSE=rmse.rf1[i]
#     rf1=rftemp
#   }
# }
data.frame(maxnodes=maxnodes,RMSE=rmse.rf1)
```

```
##      maxnodes RMSE
## 1         10   NA
## 2         20   NA
## 3         50   NA
## 4        100   NA
```